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ON

THE BAROMETRIC DEPRESSIONS

IN

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I. GENERAL REVIEW OF THE BAROMETRIC DEPRESSIONS.

January.—There were 19 barometric depressions passed over Japan and its neighbouring seas in this month, of which 3 were continental cyclones, 2 secondary depressions, and the remaining 14, low areas. None of these caused severe storms.

I. *Depression of the 1st.*—Coming from the northern part of Korea it appeared in the central part of Japan Sea on the morning of the 1st., and then travelling eastwards, crossed the northern portion of Honshu. In the evening the depression finally passed away towards the Pacific.

L. B. 748 mm.

II. *Secondary depression of the 1st.*—Developed near Ashio in the central part of Honshiu on the afternoon of the 1st, and then making its way towards the southeast, it entered the Pacific. L. B. 750 mm.

III. *Depression of the 2nd.*—Appeared in the southern part of Saghalien and then passed into the Sea of Okhotsk on the morning of the 2nd. The depression afterwards made its way southeastwards and entered the Pacific Ocean.

L. B. 748 mm.

IV. *Continental cyclone of the 4th and 5th.*—Came from the eastern part of Siberia to the sea off the western coast of Hokkaido on the afternoon of the 4th, and moved slowly southeastward, passing through the Strait of Tsugaru into the Pacific Ocean on the afternoon of the 5th.

L. B. 750 mm.

V. *Depression of the 4th.*—Came from the southern part of Saghalien, and on the afternoon of the 4th it appeared on the east of Hokkaido. Tne depression, then, travelled southeastwards and entered the Pacific.

L. B. 750 mm.

VI. *Continental cyclone of the 9th.*—Appeared in the neighbourhood of Vladivostock on the morning of the 9th. Then, it moved to the northeast, and passing over the southern extremity of Saghalien, entered the sea of Okhotsk. L. B. 750 mm.

VII. *Continental cyclone of the 12th and 13th.*—Came from Fukien province and next appeared near the gulf of Wenchon on the afternoon of the 12th. Travelling northeastwards the depression passed over the Korea Strait on the morning of the 13th and finally disappeared in the sea off Hamada in the afternoon. L. B. 754 mm.

VIII. *Depression of the 13th.*—Appeared in the sea off our south coast on the afternoon of the 13th, from which it proceeded eastwards into the Pacific.

L. B. 754 mm.

IX. *Depression of the 17th and 18th.*—Came from Siberia, and on the evening of the 17th, it appeared in the west of the Tsugaru Strait. Then the depression took its course towards the southeast and passed over the neighbourhood of Aomori. On the afternoon of the 18th it entered the Pacific.

L. B. 755 mm.

X. *Depression of the 18th.*—Appeared near the Soya Strait on the afternoon of the 18th, and then moving northeastwards passed away into the Sea of Okhotsk. L. B. 756 mm.

XI. *Depression of the 19th to the 21st.*—Appeared in the sea south of Ishigaki on the afternoon of the 19th, and then moving rapidly northeastwards the depression came to the sea off the coast of the Pacific on the 20th. On the morning of the 21st it was located in the sea off the southeastern coast of Hokkaido. The depression caused a stormy weather in the southwestern islands on the 20th, while it was passing. L. B. 746 mm

XII. *Depression of the 19th and 20th.*—Came from the northern Korea, appearing in the central portion of the Japan Sea on the night of the 19th. Later it travelled northeastwards and passing over the northern Hokkaido, entered the Sea of Okhotsk on the night of the 20th. L. B. 750 mm.

XIII. *Depression of the 21st.*—Came from the gulf of Tartary, and on the morning of the 21st, it appeared in the Sea of Okhotsk. The depression, moving eastwards, passed away into the Pacific Ocean. L. B. 746 mm.

XIV. *Depression of the 22nd.*—Came from the northern Korea and on the morning of the 22nd appeared in the central portion of the Japan Sea. The depression, then crossing the northeastern portion of Honshu, entered the Pacific, and caused a violent storm along the coast of the Japan Sea.

L. B. 752 mm.

XV. *Secondary depression of the 22nd.*—Developed near Fukushima on the afternoon of the 22nd. This depression moved southeastwards and passed into the Pacific Ocean in the evening. L. B. 752 mm.

XVI. *Depression of the 24th and 25th.*—Appeared in the sea off the west coast of Hokkaido. Moving southeastwards, the depression passed over the vicinity of Hakodate on the morning of the 25th and finally entered the Pacific.

L. B. 758 mm.

XVII. *Depression of the 25th.*—Seemed to have come from the Sea of Okhotsk, and on the morning of the 25th the depression was found in the sea east of Hokkaido. Finally it entered the Pacific. L. B. 758 mm.

XVIII. *Depression of the 30th and 31st.*—Was found in the sea southeast of Riukiu on the morning of the 30th and then it made its way towards the northeast. On the morning of the 31st the depression was located in the sea off the Boso Peninsula. L. B. 758 mm.

XIX. *Depression of the 30th.*—Developed in the bay of Wakasa on the morning of the 30th, and passed over the sea off the Noto peninsula in the afternoon of the same day. This depression was found in the northern part of Japan Sea on the afternoon of the 31st. L. B. 758 mm.

February.—The number of the barometric depressions that passed over Japan and its neighbouring seas in the month was 21 in total. Of these, there were 6 continental cyclones, 2 secondary depressions, and 13 low areas. The depressions that came from the continent and passed over Japan Sea were comparatively many, and those that appeared in the Pacific Ocean were only six.

I. *Depression of the 3rd.*—Came from the Gulf of Tartary, and on the morning of the same day it was located in the Sea of Okhotsk. The depression, travelling eastwards, entered the Pacific. L. B. 750 mm.

II. *Secondary depression of the 3rd.*—Developed in the centre of Kiushu on the morning of the 3rd, and proceeding towards the east, entered the Pacific Ocean. This depression caused a rainfall in Kiushu and the western part of Honshu. L. B. 760 mm.

III. *Depression of the 4th.*—Appeared in the sea off the southeastern Pacific coast on the afternoon of the 4th and travelled northeastwards. L. B 756 mm.

IV. *Depression of the 5th.*—Appeared in the sea far off the southeast coast on the evening of the 5th and travelled northeastwards. L. B. 760 mm.

V. *Depression of the 6th.*—It appeared that this depression came from the northern part of Korea. On the morning of the 6th it was located in the sea off the northwestern coast of Honshu, and then crossing the Tsugaru Strait, entered the Pacific. L. B. 757 mm.

VI. *Depression of the 7th and 8th.*—This depression which came from the northern Korea was found in the central part of the Japan Sea on the night of the 7th. It made its way towards the NNE. L. B. 753 mm.

VII. *Depression of the 7th and 8th.*—Came from the sea south of Riukiu to that

off the southern Pacific coast in the evening of the 7th. Travelling north-eastwards, the depression passed over the sea off the Boso Peninsula on the afternoon of the 8th, and finally entered the Pacific Ocean. This depression caused somewhat violent storm on the South coast. L. B. 754 mm.

VIII. *Depression of the 10th to the 13th.*—Coming from the northern Korea, this depression appeared in the Gulf of Korea on the evening of the 10th, and then moved eastwards, as far as the central part of the Japan Sea on the morning of the 11th. The depression, then, changed its course to the northeast, and appeared in the sea west of Hokkaido in the evening. On the morning of the 12th it moved away towards Saghalien. This depression caused a stormy weather on the coast of the Japan Sea, when it was passing along. L. B. 750 mm.

IX. *Depression of the 11th.*—Appeared in the sea off the southeastern coast on the evening of the 11th, and then passed away towards the north-east. L. B. 758 mm.

X. *Depression of the 12th and 13th.*—Coming from the northern part of Korea, appeared in the central part of the Japan Sea on the afternoon of the 12th. Then, the depression began to move northeastwards, and on the morning of the 13th it was located in the west of Hokkaido. It finally entered the Sea of Okhotsk. L. B 742 mm.

XI. *Continental cyclone of the 14th.*—Coming from the southern Manchuria, it passed over the Eastern Sea of China on the morning of the 14th. Moving northeastwards it passed through the Korea Strait on the afternoon of the same day. The depression disappeared somewhere in the Bay of Wakasa in the evening. L. B. 760 mm.

XII. *Depression of the 15th.*—Appeared in the sea off the southeastern coast on the morning of the 15th, and moving northeastwards, passed away into the Pacific Ocean. L. B. 758 mm.

XIII. *Depression of the 16th and 17th.*—Appeared in the sea off the southeast coast on the afternoon of the 16th, with its course northeastwards. On the morning of the 17th it was located in the sea off the Peninsula of Boso and finally went away into the Pacific. L. B. 756 mm.

XIV. *Depression of the 17th.*—This depression, which came from the northern Korea, appeared in the southern part of the Japan Sea on the morning of the 17th, and then crossing the central portion of Honshu, entered the Pacific. L. B. 754 mm.

XV. *Secondary depression of the 17th.*—Developed in the central part of Honshu on the afternoon of the 17th, and taking its course southeastwards, passed away into the Pacific. L. B. 752 mm.

XVI. *Depression of the 19th.*—Appeared in the Gulf of Tartary on the afternoon of the 19th, and taking its course eastwards, crossed the southern portion of Saghalien. L. B. 758 mm.

XVII. *Continental cyclone of the 19th to the 21st.*—Developed on the afternoon of the 19th in the Yangtse valley, whence it moved eastwards into the Yellow Sea, and then crossing the southern part of Korea, entered the Japan Sea. Thence, the depression moved on rapidly northeastwards, reaching the sea off the western coast of Hokkaido, on the afternoon of the 21st. It finally went away towards the Sea of Okhotsk. L. B. 742 mm.

XVIII. *Continental cyclone of the 20th and 21st.*—This depression, which appeared in the Gulf of Hangchow on the afternoon of the 20th, moved on northeastwards, and in the evening it passed over the neighbourhood of Quelpart Island. On the morning of the 21st it passed through the Korea Strait and on its afternoon it reached the sea off the Peninsula of Noto, whence it appeared to have crossed the northern part of Honshu and entered the Pacific. The depression caused a violent storm in the western part of Honshu. L. B. 746 mm.

XIX. *Continental cyclone of the 23rd.*—Came from the northern Korea and on the morning of the 23rd it appeared in the northern part of the Japan Sea. On the afternoon it crossed the southern extremity of Saghalien and entered the Okhotsk Sea. L. B. 760 mm.

XX. *Continental cyclone of the 24th.*—Came from the northern Korea and entered the Japan Sea on the morning of the 24th. Then, crossing the northern part of Hokkaido, it entered the Sea of Okhotsk. L. B. 760 mm.

XXI. *Continental cyclone of the 28th and 29th.*—Came from the northern part of China and entered the Yellow Sea on the 28th. Then, the depression crossed the northern Korea, thus entering the Japan Sea. On the morning of the 29th, it passed over the southern extremity of Saghalien and entered the Sea of Okhotsk. The depression caused a violent storm on the coast of the Japan Sea and Hokkaido. L. B. 747 mm.

March.—The number of the depressions that passed over Japan and its neighbouring seas during this month was 15 in all; but none of these were strong enough to cause violent storms. The depressions whose central pressure was lower

than 750 mm. were only three. A very few appeared in the Japan Sea. Most of the depressions passed over the seas off the Pacific coast.

I. *Depression of the 1st to the 3rd.*—Appeared in the southern China on the afternoon of the 1st. It crossed Kiushu and entered the Pacific. Then, moving northeastwards, the depression entered the Sea of Okhotsk on the evening of the 3rd. It caused a rainfall all over Honshu on the morning of the 2nd, a strong wind along the Pacific coast, and a violent snow storm in Hokkaido. L. B. 743 mm.

II. *Depression of the 3rd to the 6th.*—Appeared in the sea off the southeastern coast of Formosa on the evening of the 3rd and took the NNE course. On the morning of the 8th, the depression passed through the Korea strait and caused a rainfall all over Honshu and a strong wind in some places of Kiushu. Then it moved northward along the Japan Sea coast and went away towards Saghalien Island on the morning of the 6th.

L. B. 743 mm.

III. *Depression of the 7th to the 9th.*—Appeared near Foochow in China at 10 p. m. of the 7th, whence it moved towards the ENE. On the morning of the 9th, the depression was found in the sea far off the southeastern coast of Honshu and finally went away into the Pacific. This depression caused more or less rainfall all over Honshu, but no violent storm.

L. B. 755 mm.

IV. *Continental cyclone of the 9th.*—Appeared on the morning of the 9th in the west of Saghalien, whence it took the SE course and entered the Pacific.

L. B. 762 mm.

V. *Depression of the 10th to the 11th.*—On the morning of the 10th this depression was found in the sea far south of the Okinawa Group whence it made its way northeastwards, passing south of Hachijojima on the afternoon of the 11th. As this depression was a shallow one, it did not cause any noticeable storm. L. B. 755 mm.

VI. *Depression of the 10th to the 12th.*—Just when the depression above described was passing far south of the southern coast of Honshu, the present depression developed in the southern part of the Japan Sea, whence it moved towards the northeast, and entered the Sea of Okhotsk on the forenoon of the 12th, by passing through the Strait of Soya. L. B. 748 mm.

VII. *Depression of the 12th to the 13th.*—Appeared far south of the Yayeyama Islands on the forenoon of the 12th and then travelled towards the ENE.

At the latitude 26° N, it changed its course to the N. E. gradually, and at 10 p. m. on the 13th it passed away into the Pacific. Since this depression did not approach the coast, it caused a slight rainfall only in the south-eastern part of Honshu. L. B. 759 mm.

VIII. *Depression of the 16th to the 20th.*—This depression, which appeared on the south of the Islands of Yayeyama on the forenoon of the 16th, moved gradually northwards, and on the morning of the 17th came to the sea northwest of Okinawajima. The depression gradually changed its course to the ENE and then to the north, and at 2 p. m. on the 19th it came near Hachijojima, whence it finally went away into the Pacific.

L. B. 752 mm.

IX. *Depression of the 19th to the 21st.*—Developed in the central portion of the Japan Sea, when the depression described above was approaching the south-eastern coast of Honshu on the night of the 19th. Then the former took its course northeastwards and crossed the northern part of Hokkaido. Late on the 21st it entered the Okhotsk Sea. This depression caused a violent snow storm in Hokkaido and the northern part of Honshu.

L. B. 751 mm.

X. *Depression of the 21st.*—Appeared on our southeast coast on the afternoon of the 21st and moved towards the NNE. On the afternoon of the 22nd it was located in the sea off the southeastern coast of Hokkaido.

L. B. 755 mm.

XI. *Continental cyclone of the 23rd to the 25th.*—Developed in the middle Yang-tse valley on the morning of the 23rd, and approached the western part of Kiushu early on the 24th, thus causing rainfall all over the western part of Honshu. This depression passed through the Korea Strait and entered the Japan Sea. Travelling along the coast it went away towards Saghalien Island on the afternoon of the 25th. L. B. 753 mm.

XII. *Depression of the 24th to the 25th.*—Appeared in the sea off the south coast on the afternoon of the 24th and moved northeastwards. Crossing the Peninsula of Boso, it passed away into the Pacific early on the morning of the 25th. This depression caused a thunderstorm near its centre, and some damage in the Boso regions. L. B. 753 mm.

XIII. *Continental cyclone of the 25th and 26th.*—Appeared in the valley of the Amoor River at 10 p. m. of the 25th and moved southeastwards. On the morning of the 26th it passed over the southern part of Saghalien,

and on the night of the 27th entered the Pacific. This depression caused a violent snow storm in Hokkaido and in the northeastern Japan.

L. B. 725 mm.

XIV. *Continental cyclone of the 26th to the 29th.*—Developed in the valley of Yangtse on the morning of the 26th, and thence it moved towards the ENE. On the early morning of the 27th the depression reached Amami Oshima and then travelled along the Pacific coast. It caused rainy weather in the greater part of Honshu and a strong wind on the southeastern Pacific coast. The depression went away into the Pacific. L. B. 760 mm.

XV. *Depression of the 30th to the 31st.*—Appeared far off on the south of Ishigakijima early on the morning of the 30th and moved northeastwards. As this depression was far away from the coast, its state was not clearly known. L. B. 759 mm.

April.—There were 16 depressions that passed over Japan and its neighbouring seas; but none of these caused violent storms. Most of the depressions passed over the Japan Sea.

I. *Depression of the 1st.*—Was found far off the southern coast on the early morning of the 1st. With its course to the NE, the depression passed over the sea off the southeastern coast in the evening, causing a strong wind, slight rain in the Peninsula of Boso. L. B. 762 mm.

II. *Continental cyclone of the 1st to the 4th.*—This depression which came from the Yangtse valley was located in the northern part of the Yellow Sea, and thence with a ENE course, entered the Japan Sea after crossing the southern part of Korea. On the afternoon of the 3rd it touched the northern extremity of Hokkaido and then entered the Sea of Okhotsk. This depression did not cause any noticeable storm. L. B. 759 mm.

III. *Depression of the 3rd to the 5th.*—Appeared in the sea off the eastern extremity of Formosa on the evening of the 3rd, and made its way towards the northeast. On the afternoon of the 4th it reached the western part of Kiushu, whence it moved eastwards into the Pacific. This depression caused a somewhat strong storm and a heavy rainfall on the Pacific coast, though the depression was not deep. L. B. 750 mm

IV. *Continental cyclone of the 6th and 7th.*—Came from Siberia on the evening of the 6th, and early on the morning of the 7th it reached the east of Saghalien, finally entering the Sea of Okhotsk. L. B. 757 mm.

V. *Continental cyclone of the 8th to the 10th.*—This depression, which

developed in the Yangtse valley on the 7th, moved northeastwards, and on the evening of the 8th it crossed the central part of Korea, entering the Japan Sea. On the afternoon of the 9th it was found on the northwest of Noto and on the morning of the 10th it went away towards Saghalien. This depression caused slight rainfall in Kiushu on the 8th and 9th, and strong wind all over Honshu on the afternoon of the 9th.

L. B. 755 mm.

VI. *Continental cyclone of the 12th to the 14th.*—This depression, which developed in the Yangtse valley on the 11th, moved northeastwards at first, and on the early morning of the 13th it was found in the sea off the western coast of Korea. It caused a violent storm in the northern part of Korea, and then it gradually changed its course eastwards. On the afternoon of the 13th the depression entered the Japan Sea, and on the morning of the 14th it crossed the northeastern part of Honshu. Finally it went away into the Pacific. This depression caused rainfall over the greater part of Honshu and strong wind on the coast regions. L. B. 757 mm.

VII. *Depression of the 15th to the 16th.*—Appeared in the sea far off the southwestern coast of Kiushiu on the morning of the 15th and moved towards the ENE, reaching the sea off the Pacific coast. On the evening of the 16th it passed over the sea off the southeastern coast, and finally went away into the Pacific Ocean. This depression was not deep, but it caused somewhat strong storm. Its rainfall area was large. On the morning of the 16th it rained over the area extending from the western part of Honshu to its northeastern portion. L. B. 758 mm.

VIII. *Depression of the 15th to the 19th.*—Appeared in the Formosa Channel with its course northeastwards on the morning of the 15th, and then in the sea off the southwestern part of Kiushu on the morning of the 16th. Finally it passed away into the Pacific Ocean, taking almost the same course as that of the depression described in VII. L. B. 757 mm.

IX. *Depression of the 17th to the 19th.*—This depression appeared in the sea off the southern coast of Formosa in the evening of the 17th and moved northeastwards. In the same evening it passed over the central part of Kiushiu and made its way towards the ENE along the Pacific coast. On the evening of the 19th it passed the sea southeast of the Peninsula of Boso and finally went away into the Pacific Ocean. It threatened rain all over Japan. L. B. 753 mm.

X. *Secondary depression of the 18th to the 19th.*—Developed in the sea west of

the Peninsula of Noto on the evening of the 18th, and then travelled northeastwards, crossing the northern part of Honshu. On the 19th, it passed along the southern coast of Hokkaido into tne Pacific.

L. B. 754 mm.

XI. *Depression of the 20th to the 21st.*—Came from the northern part of Korea, appearing in the sea off the southwestern part of Hokkaido at 2 p. m. of the 20th. It went away towards Saghalien at the noon of the 21st.

L. B. 758 mm.

XII. *Continental cyclone of the 23rd and 24th.*—Developed in the neighbourhood of the Yangtse, and moved northeastwards, crossing Korea and then appearing in the Japan Sea. On the evening of the 24th the depression approached Saghalien. It threatened rainfall along the coast of Japan Sea. L. B. 759 mm.

XIII. *Depression of the 24th to the 26th.*—Appeared on the coast of the southern China at 6 a. m. of the 24th whence it moved towards the NNE. On the forenoon of the 25th it crossed the southern part of Korea and entered the Japan Sea. Thence it changed its course to the northeast, and early on the morning of the 26th the depression passed through the Strait of Tsugaru. Passing over the sea southeast of Hokkaido, it entered the Sea of Okhotsk. It caused a violent storm all over Japan. Many places suffered from inundations. L. B. 751 mm.

XIV. *Continental cyclone of the 29th.*—Came from the neighbourhood of Wladivostock. On the afternoon of the 29th it appeared in the northern part of the Japan Sea. Moving northeastwards it crossed the southern part of Saghalien and entered the Sea of Okhotsk in the evening.

L. B. 760 mm.

XV. *Depression of the 28th to the 1st of May.*—Appeared in the sea southeast of Formosa on the evening of the 28th and moved northeastwards. On the morning of the 29th it approached Quelpart Island, and on the evening it passed through the Korea strait towards the Japan Sea. On the 1st of May the depression crossed the southern part of Saghalien and finally entered the Sea of Okhotsk. L. B. 752 mm.

XVI. *Continental cyclone of the 29th to the 30th.*—First appeared in the neighbourhood of Wladivostock on the morning of the 29th and moved northeastwards. In the evening it crossed the southern end of Saghalien and on the early morning of the 30th it entered the Sea of Okhotsk. L. B. 752 mm.

May.— There were 19 depressions that passed over Japan and its neighbouring seas during this month. 4 of them were secondary depressions.

I. *Continental cyclone of the 1st to the 3rd.*—This depression, which developed in the upper Yangtse valley on the 29th of April, passed north of Shanghai on the 30th and approached south of Quelpart Island on the next morning, whence taking the northeast cource it entered the Japan Sea. On the evening of the 3rd the depression disappeared in the neighbourhood of the Island of Okujiri. L. B. 753 mm.

II. *Secondary depression of the 1st to the second.*—Developed in the northern region of Kiushu on the afternoon of the 1st, and thence it made its way southeastwards, but it gradually changed its course to the east. On the afternoon of the 2nd the depression reached the east coast of the Peninsula of Kii, and in the evening it passed the neighbourhood of Hachijo Island towards the Pacific Ocean. L. B. 754 mm.

III. *Continental cyclone of the 1st.*—This appeared on the morning of the 1st on the eastern coast of Siberia, whence it moved eastwards and passed over the southern part of Saghalien. On the afternoon of the same day it went away towards the Pacific, causing strong wind in the northeastern part of Hokkaido. L. B. 753 mm.

IV. *Continental cyclone of the 4th to the 5th.*—Appeared on the morning of the 4th on the east of the Peninsula of Shantung, whence it travelled towards the northeast. On the afternoon of the same day it appeared on the east of Wonsan, and on the afternoon of the 5th it reached the sea off the western part of Hokkaido. Then, crossing its northern part, the depression entered the Sea of Okhotsk. L. B. 745 mm.

V. *Depression of the 4th to the 5th.*—Appeared on the east of Formosa on the afternoon of the 4th and moved northeastwards, entering the Eastern Sea of China. In the evening it passed north of Amami Oshima island and in the next morning it was located in the sea south of Hachijo Island, whence it travelled towards the ESE. L. B. 755 mm.

VI. *Continental cyclone of the 9th to the 10th.*—Appeared on the south of Saghalien on the afternoon of the 9th, and moved southeastwards. In the evening this depression crossed Southern Kuriles, and on the morning of the 10th it entered the Pacific. L. B. 748 mm.

VII. *Continental cyclone of the 10th.*—Appeared in the northern part of the Japan Sea and took its course southeastwards on the morning of the 10th. On the

afternoon of the same day, it entered the Pacific, by crossing the southern part of Hokkaido. L. B. 750 mm.

VIII. *Continental cyclone of the 11th and 12th.*—Developed in the Yangtse valley, on the 10th, whence it moved towards the ENE. On the evening of the 11th the depression entered the Japan Sea by crossing the southern Korea, and on the 12th it entered the Pacific by crossing the northeastern part of Honshu. This depression caused a storm all over Japan, especially somewhat heavy rainfall on the coast of the Japan Sea. L. B. 747 mm.

IX. *Secondary depression of the 12th.*—Developed near Kofu on the afternoon of the 12th. Moving southeastwards it came out into the bay of Sagami and finally entered the Pacific Ocean. This depression caused somewhat severe storm on the SE coast. L. B. 746 mm.

X. *Depression of the 12th to the 15th.*—Appeared in the sea off the southwestern part of Formosa on the night of the 12th and moved towards the northeast. At 2 p. m. on the 13th the depression reached the southern part of Kiushu, whence it made its way eastwards along the Pacific coast. On the night of the 14th it passed over the neighbourhood of Hachijo Island towards the Pacific Ocean. This depression caused stormy weather on the SE coast of Japan. L. B. 757 mm.

XI. *Continental cyclone of the 16th to the 18th.*—This depression, which first appeared in the Yangtse valley on the 15th, made its progressive motion towards the ENE, and on the night of the 16th it was found in the central part of the Yellow Sea. On the morning of the 17th the depression passed over the southern part of Korea, and on the afternoon of the 18th it crossed Hokkaido, thus entering the Sea of Okhotsk. It caused stormy weather in Hokkaido. L. B. 748 mm.

XII. *Secondary depression of the 18th.*—Developed near Mayebashi on the afternoon of the 18th and travelled southeastwards. In the evening it entered the Pacific Ocean, by passing over the sea of Boshu. This secondary depression caused a storm in SE Japan. L. B. 752 mm.

XIII. *Depression of the 20th and 21st.*—Appeared in the sea far south of Naha on the early morning of the 20th. Taking a course of parabolic form, it moved northeastwards, and reached the sea far off the south coast. Finally it disappeared into the Pacific. As this depression passed far off the coast of Japan, the detail of its course was not known. L. B. Unknown.

XIV. *Depression of the 21st and 22nd.*—Appeared in the Eastern Sea of China, with its course to the northeast, on the afternoon of the 21st. In the even-

ing it reached the neighbourhood of Quelpart Island and in the next morning it passed through the Korea strait. On the afternoon of the 22nd the depression crossed Honshu and seemed to have disappeared into the Pacific. It caused rainfall in the western part of Japan. L. B. 749 mm.

XV. *Depression of the 22nd to the 23rd.*—Appeared in the northern part of the Japan Sea on the morning of the 22nd and travelled northeastwards. At 2 p. m. on the same day the depression reached the southern end of Saghalien Island and then entered the Okhotsk Sea. Later it passed the southern part of the Kuriles and on the afternoon of the 23rd entered the Pacific. L. B. 744 mm.

XVI. *Depression of the 23rd to the 26th.*—Appeared in the Eastern Sea of China on the afternoon of the 23rd, with its course northeastwards. On the early morning of the 24th it passed through the Strait of Iki, thus entering the Japan Sea. At 2 p. m. on the 26th the depression crossed Hokkaido and finally entered the Sea of Okhotsk. L. B. 750 mm.

XVII. *Secondary depression of the 24th to the 26th.*—Developed on the afternoon of the 24th in the sea southwest of the Peninsula of Kii, whence it made its way towards the ESE. On the morning of the 26th it came to the sea off Boshu and finally went away towards the Pacific. L. B. 750 mm.

XVIII. *Depression of the 27th to the 29th.*—Appeared in the Eastern Sea of China on the morning of the 27th. At first it travelled northeastwards. On the next morning it passed over the neighbourhood of Yakushima, and then moving eastwards on the south of Hachijo island it entered the Pacific Ocean. L. B. 755 mm

XIX. *Depression of the 28th to the 30th.*—On the morning of the 28th this was found in the sea southeast of Formosa, and moving northeastwards it reached near Naha in the evening. Thence it travelled northwards, and on the morning of the 29th, it passed through the Strait of Tsushima, thus entering the Japan Sea. On the afternoon of the 30th it disappeared in the sea off the west coast of Hokkaido. L. B. 748 mm.

June.—The total number of the depressions that passed over Japan and its neighbouring seas during this month was 12, and none of these caused violent storms

I. *Continental cyclone of the 1st to the 4th.*—Came from the northern part of China and early on the morning of the 1st it appeared in the Gulf of Liao-tung, whence it moved eastwards. On the afternoon of the 2nd it reached the southern extremity of Manchuria, whence it made its way

northeastwards. On the afternoon of the 4th it passed away towards the Okhotsk Sea. This depression passed the sea far off the coast of Japan, but caused a storm in Hokkaido and the northern part of Honshu.

L. B. 748 mm.

II. *Depression of the 4th to the 8th*.—This started from the sea off the southwestern part of Formosa on the afternoon of the 4th, and then passing through the Formosa channel come near Foochow in China, whence it moved gradually northeastwards. On the early morning of the 7th it was found in the central part of the Japan Sea, and on the afternoon of the 8th the depression passed through the Strait of Soya, finally entering the Sea of Okhotsk.

L. B. 749 mm.

III. *Secondary depression of the 7th and 8th.*—Developed in the central part of Honshu at 2 p. m. of the 7th, and moving northeastwards, it entered the Pacific on the morning of the 8th. L. B. 748 mm.

IV. *Depression of the 9th to the 12th.*—Came from the south of the Islands of Yayeyama, and on the afternoon of the 11th it reached the sea off the south Pacific coast. In the evening the depression took its course along the southeastern coast of Honshu and reached the sea off Kashima on the morning of the 12th. When this depression was passing over the sea off the southern coast of Honshu, another shallow depression came from the region of Nagasaki and disappeared in the northern part of Kiushu. These two depressions threatened all over Japan with a storm. L. B. 754 mm.

V. *Depression of the 13th to the 14th.*—Appeared in the Strait of Tsushima on the morning of the 13th, and at first moved southeastwards, and then gradually changed its course to the northeast. On the afternoon of the same day the depression reached the sea off Kii, and on the morning of the 14th it went away towards the Pacific Ocean. L. B. 753 mm.

VI. *Depression of the 13th and 14th.*—Appeared in the central part of the Japan Sea on the afternoon of the 13th, and taking its course northeastwards the depression passed away towards the Island of Saghalien on the 14th.

L. B. 753 mm.

VII. *Continental cyclone of the 15th to the 17th.*—Developed in the Yangtse valley on the morning of the 15th and moved eastwards. In the evening it passed through the Channel of Korea towards the Japan Sea, and moving along the coast it was found in the sea off Noto on the afternoon of the 16th. On the morning of the 17th the depression crossed the northern part of Hokkaido and entered the Sea of Okhotsk. L. B. 748 mm.

VIII. *Depression of the 15th to the 17th.*—Appeared on the north of the Yayeyama Islands on the 15th, and moving northeastwards it passed over Kiushu and a part of Shikoku. On the morning of the 17th it went away towards the Pacific Ocean. L. B. 748 mm.

IX. *Depression of the 17th to the 19th.*—This depression appeared in the Gulf of Pechili on the afternoon of the 17th, and crossing the northern part of Korea, it entered the Japan Sea, and travelled towards the Island of Saghalien. L. B. 745 mm.

X. *Depression of the 19th.*—Came from the sea off the northern part of Formosa on the early morning of the 19th and moved northeastwards. In the evening it approached Amami-oshima, whence it went away towards the Pacific Ocean. L. B. 755 mm.

XI. *Depression of the 24th to the 26th.*—Appeared in the Eastern Sea of China on the morning of the 24th, and travelling northwestwards it came to the east of Shanghai, whence its course changed to the northeast. On the afternoon of the 25th the depression reached the southern part of Korea, and then through the Japan Sea and Hokkaido it went away towards the Pacific. L. B. 752 mm.

XII. *Typhoon of the 27th to the 29th.*—Started from the south of Formosa, with its course northwestwards. It landed on the neighbourhood of Foochow and entered the continent. On the afternoon of the 29th it was found in Manchuria. This typhoon caused a violent storm in Formosa.

L. B. 740 mm

July.—The total number of the depressions that passed over Japan and its neighbouring seas was 15. Among them there were two depressions, the readings of which were below 740 mm.

I. *Continental cyclone of the 1st.*—In the later part of June, this depression appeared on the coast of Siberia and moved southeastwards, passing through the southwestern part of Hokkaido. On the 1st of this month it appeared in the sea east of Kinkasan. L. B. 751 mm.

II. *Depression of the 1st to the 2nd.*—On the morning of the 1st, this depression appeared near Tentsien and moved northeastwards. In the evening it came to Bay of Possiet, whence, changing its course to the southeast, it passed over the Sea of Japan. Then it crossed Honshu and passed over the neighbourhood of the Bay of Tokyo, and entered the Pacific.

L. B. 750 mm.

III. *Typhoon of the 5th.*—This typhoon appeared in the southwest of Ishigaki-

jima early on the morning of the 5th, and moving northwestwards it landed on Sekiang province in the evening. L. B. 745 mm.

IV. *Depression of the 7th.*—Appeared in the southern part of Formosa on the morning of the 7th and made its way towards the NNE. On the afternoon of the 7th it changed its course towards the northwest, entering China. L. B. 750 mm.

V. *Typhoon of the 8th to the 11th.*—Appeared in the sea far southeast of Riukiu at 6 a. m. of the 8th and moved northeastwards. On the evening of the 9th it landed on the south eastern part of the Peninsula of Kii, and on the afternoon of the 10th it appeared on the southwest of Sado. Then passing over the neighbourhood of Akita it again came to the Pacific coast, and finally touching the eastern part of Hokkaido it entered the Sea of Okhotsk. L. B. 737 mm.

VI. *Depression of the 13th and 14th.*—Appeared in the sea south of Ishigakijima on the night of the 13th and taking its course towards the NNW the depression entered China from the north of Foo-chow on the night of the 14th. L. B. 745 mm.

VII. *Continental cyclone of the 15th to the 17th.*—Appeared on the north of Wladivostock on the night of the 15th. It made its way eastwards and came to the northern part of the Japan Sea. Finally it crossed Hokkaido and on the night of the 16th entered the Pacific Ocean. L. B. 749 mm.

VIII. *Depression of the 15th to the 17th.*—Another depression appeared in the Gulf of Korea on the evening of the 15th, and moving northeastwards, it crossed the Japan Sea and Hokkaido. It finally entered the Sea of Okhotsk. L. B. 750 mm.

IX. *Continental cyclone of the 21st to the 22nd.*—This depression which appeared on the evening of the 21st in Manchuria made its way eastwards, and on the next morning it appeared in the northern part of the Japan Sea. It finally passed over the southern part of Hokkaido towards the Pacific. L. B. 752 mm.

X. *Continental depression of the 22nd to the 23d.*—Appeared in the Yangtsekiang valley on the early morning of the 22nd and on the afternoon it came to the central part of the Yellow Sea, whence it travelled northeastwards, crossing Korea and entering the Japan Sea. Then, changing its course to the east, the depression passed over the Japan Sea and the northeastern part of Honshu, and on the morning of the 23rd it went away towards the Pacific. L. B. 753 mm.

XI. *Continental depression of the 23rd to the 25th.*—On the evening of the 23rd this depression appeared in the Shangtung Peninsula and moved eastwards. Crossing Korea, it travelled towards the eastern part of the Amour region on the afternoon of the 25th. L. B. 754 mm.

XII. *Depression of the 25th to the 27th.*—Appeared far off Hachijojima and moved northeastwards, on the morning of the 25th. It crossed the northern extremity of Honshu, and on the morning of the 28th passing over the southwestern part of Hokkaido it entered the Okhotsk Sea. L. B. 737 mm.

XIII. *Typhoon of the 25th to the 27th.*—Appeared on the south of the islands of Yayeyama on the night of the 25th. Taking the northwest course, the typhoon passed between Ishigakijima and Formosa on the morning of the 26th and landed on the South China. The details are given later.
L. B. 729 mm.

XIV. *Continental depression of the 29th to the 30th.*—Appeared in the neighbourhood of Wladivostock on the afternoon of the 29th, whence it travelled northeastwards. Touching the northern extremity of Hokkaido on the 30th it entered the Sea of Okhotsk, whence it passed over the southern part of the Kuriles and entered the Pacific Ocean. L. B. 756 mm.

XV. *Depression of the 30th and 31st.*—This was found on the night of the 30th in the offing far southeast of Okinawa, whence it appeared to have moved northeastwards. Since the path of this depression was far away from the land, its detailed conditions were not known. L. B. 757 mm.

August.—The number of the depressions that passed over Japan and its neighbouring seas during this month was 8, of which 2 came from North China and went away towards Saghalien Island, 1 came from Siberia, and moving eastwards, passed over Hokkaido, 1 came from Siberia and went away directly towards Saghalien Island, 4 came from the southern part of the North Pacific Ocean and took parabolic courses. Most of these depressions were deep; but only two or three caused some damage, because they did not come near Japan.

I. *Continental depression of the 1st to the 2nd.*—This depression started from the Amour region with its course eastwards. On the morning of the 2nd it approached the western part of Hokkaido, and on the evening it passed away towards the Sea of Okhotsk. This depression caused a cloudy weather in the northeastern part of Honshu. L. B. 751 mm.

II. *Depression of the 1st to the 4th.*—This depression developed somewhere at the latitude 23° N and at the longitude 135° E on the morning of the 1st

and moved northwestwards. On the morning of the 2nd it came to the sea east of Amamioshima, whence it changed its course to the northeast. On the morning of the 3rd it was found on the southeast of Kii, causing a bad weather in the eastern half of Honshu. In coast regions the force of wind was quite strong and in some places blew a violent wind. The rain area, however, was small, and the amount of rainfall was also small. The depression travelled slowly towards the sea off the southeast coast of Honshu, and on the night of the 4th it was passing the far east of Choshi.

L. B. 748 mm.

III. *Continental depression of the 5th and 6th.*—Started on the evening of the 5th from the Amour region towards the ENE. On the afternoon of the 6th the depression crossed the Island of Saghalien and entered the Sea of Okhotsk. L. B. 752 mm.

IV. *Continental depression of the 6th to the 13th.*—On the morning of the 6th this depression appeared in North China moving northeastwards. On the morning of the 8th it came near Port Arthur, causing a storm all over the northern part of Korea and the Peninsula of Liaotung. Then it gradually moved towards the Amour region, and on the morning of the 13th it appeared to have passed over the Island of Saghalien. L. B. 748 mm.

V. *Typhoon of the 12th of the 18th.*—A depression appeared to have developed in the sea east of Luzon on the 12th, and caused a heavy northeast wind and a cloudy weather in the islands of Riukiu and Formosa. On the morning of the 15th, as was expected, a depression appeared on the south of the Islands of Yayeyama, and moved towards the NNW. At 4 p. m. it went northwards passing over the west of the islands, and when it reached the latitude 28° N, it changed its course to the NNE, approaching the western coast of Korea. On the night of the 18th the depression, crossing Korea obliquely, entered Manchuria and caused a violent southerly or southeasterly wind in Kiushu. The amount of rainfall was not very great.

L. B. 735 mm.

VI. *Continental depression of the 16th to the 17th.*—This started from the Gulf of Liaotung on the morning of the 16th and moved northeastwards, passing the southern part of Manchuria rapidly. On the morning of the 17th it appeared to have gone towards Saghalien Island, though not quite certain.

L. B. 753 mm.

VII. *Typhoon of the 18th to the 21st.*—This typhoon, which developed near the Marshall Islands on the 18th, moved northwestwards, and on the morning of the 19th it approached the eastern part of Riukiu. On the south coast

and in the southwest islands the barometer fell rapidly, and in Amami Oshima and Naha strong north wind continued blowing and there was an indication of a storm. The centre of this typhoon proceeded northwards touching Oshima at 3h 20m p. m., and when it reached off the western coast of Kiushu on the morning of the 20th, it began to travel towards the NNE. On the afternoon of the same day the depression landed on the neighbourhood of Masampo, whence it crossed the southern part of Korea, entering the Japan Sea. On the evening of the 21st it passed over the neighbourhood of Wladivostock and entered the Amour region. At Amami Oshima through which the centre of the cyclone passed the barometer fell rapidly and the weather was stormy with strong north wind since the early morning of the 19th. At noon the force of the wind reached that of a hurricane, and at 2h 45m p. m. the barometer showed 716.2 mm. and the wind velocity was 43.1 metres per second. After 2h 58m p. m. the force of the wind began to diminish rapidly and at 3h 15m p. m. the lowest barometric reading was 709.4 mm. At 3h 30m p. m. the wind velocity was only 3 metres per second; but at 3h 55m p. m. the force of the wind again increased, and its direction changed from north to northwest and then again to north. On the afternoon of the 20th the weather was restored. Since the evening of the 19th a stormy weather prevailed all over the western part of Japan. Especially in Kiushu the wind was violent and much damage was caused to houses and crops. Masampo, Fusan and other places were attacked by a violent hurricane and tidal waves, which caused a great deal of damage to houses, ships, and human and animal lives. The details about this typhoon will be given later. L. B. 709,4 mm.

VIII. *Typhoon of the 27th to the 1st of September.*—Since the 24th there blew strong northerly wind and there prevailed a cloudy weather, with gradual fall of the barometer, in the southwest islands. This fact clearly showed that a cyclone existed somewhere far away on the south. On the 27th, as was expected, a depression appeared off the south eastern part of Riukiu; but it remained there almost stationary for some time. On the morning of the 29th its progressive motion began to increase and approached Amami-oshima, whence taking the northeast course it travelled towards the south-eastern part of Shikoku. In the western part of Honshu, then, the weather was windy and threatened with rain. On the night of the 30th the tpyhoon reached the Bay of Tosa, and on the next morning it was located on the south of Muroto Misaki, when the weather was stormy all over Honshu. Especially in Kinai, Nankaido, and Inland Sea regions, there prevailed a violent storm, and near the cyclonic centre the force of the wind reached

that of a hurricane. Damage, however was not great. This typhoon passed over Western Japan, and entered the Sea of Japan. On the afternoon of the 1st of September it passed through the Strait of Tsugaru and went away towards the Pacific. L. B. 740 mm.

September.—The total number of the depressions that passed over Japan and its neighbouring seas was 8, of which 2 came from the interior of China and passed over the Sea of Japan, 5 appeared in the Pacific Ocean, and 1 appeared in the northern part of the Japan Sea. There were two depressions whose barometric readings were lower than 740 mm. Especially the depression of the 17th was one of the so called tropical cyclones and caused a violent storm in the central part of Honshu.

I. *Depression of the 2nd to the 4th.*—Appeared far off the south coast on the afternoon of the 2nd, and on the morning of the 3rd it approached the south coast; but on the morning of the 4th it went away towards the ENE, without landing, L. B. 750 mm

II. *Continental depression of the 5th to the 7th.*—Started on the morning of the 5th from the Yangtsekiang valley, and on the afternoon of the same day it entered the Japan Sea by crossing the southern part of Korea. On the morning of the 7th the depression travelled northeastwards as far as the Island of Saghalien. L. B. 751 mm.

III. *Depression of the 6th.*—Appeared off the southeast coast and went away towards the northeast. L. B. 752 mm.

IV. *Continental depression of the 12th and 13th.*—Came from the Yangtsekiang valley on the morning of the 13th, and passing over the middle of Korea moved northeastwards. On the afternoon of the 13th it passed away towards the Amour regions. L. B. 755 mm.

V. *Typhoon of the 14th to the 18th.*—On the 14th this typhoon appeared in the sea south of the islands of Ogasawara whence it made its way northwestwards. At 2 a. m. on the 17th it landed on the west of Shiomisaki and crossed between Osaka and Kobe. At 6 a. m. the depression entered the Japan Sea, and then changing its course towards the ENE gradually, it crossed the northern part of Honshu. On the morning of the 18th the depression went away towards the North Pacific. The details will be given later. L. B. 724 mm.

VI. *Depression of the 20th and 21st.*—Appeared off the south coast on the morning of the 20th and travelled northeastwards. On the morning of the 21st the depression landed on the neighbourhood of Numazu, still moving

northeastwards. Passing over Tokyo and Mito, it entered the Pacific. This depression caused a storm all over the central and eastern portions of Honshu. L. B. 742 mm.

VII. *Depression of the 21st and 22nd.*—This appeared in the northern part of the Japan Sea on the afternoon of the 21st and crossing the northern part of Hokkaido, it entered the Sea of Okhotsk on the morning of the 22nd.

L. B. 745 mm.

October.—The total number of the depressions that passed over Japan and its neighbouring seas was 14; of which 3 coming from North China went away towards the Island of Saghalien; 3, coming from South China, passed over the Japan Sea; 3, also coming from South China, moved northeastwards along the Pacific coast; 1, coming from the Yangtsekiang valley, moved eastwards and disappeared into the Pacific; 1, coming from South China, disappeared in the Japan Sea; 1 appeared in the central part of Honshu and entered the Pacific; 1 appeared off the southeast coast and moved towards the NNE. Besides these, there was 1 secondary depression that developed off the south coast. There were only two depressions whose barometric readings showed below 740 mm.

I. *Depression of the 2nd and 3rd.*—On the morning of the 2nd this depression came from the sea far off the south coast, and on the morning of the 3rd it passed over the sea off Boso northeastwards into the Pacific.

L. B. 758 mm.

II. *Depression of the 2nd to the 4th.*—Appeared in the neighbourhood of Kichouwan, and on the evening of the 2nd the depression landed near Nagasaki. Then, passing over Hiroshima and Sakai, it entered the Japan Sea, whence moving northeastwards it passed over the west of Hokkaido and went away towards the Okhotsk Sea. L. B. 750 mm.

III. *Typhoon of the 3rd to the 6th.*—On the 3rd this appeared on the southeast of Ogasawara, and at 8 p. m. on the 4th it crossed the island moving northwestwards. On the forenoon of the 5th it reached the lat. 32° N whence it changed its course to the NE and in the evening it passed off Boso. On the 6th the depression was located on the east of Hokkaido and finally went away towards the Pacific. The details will be given later.

L. B. 718 mm.

IV. *Continental depression of the 7th and 8th.*—On the morning of the 7th this depression appeared in North China and with its course eastwards it crossed the northern part of Korea and entered the Japan Sea. Moving

northeastwards it passed away towards the Island of Saghalien on the afternoon of the 8th. L. B. 755 mm.

V. *Depression of the 10th and 11th.*—Appeared far off on the southwest of Hachijojima on the morning of the 10th and then touching the Island it came near the peninsula of Boso at 2 p. m. on the same day. It finally went away northeastward into the Pacific. As Hachijojima was situated at the track of this depression, there the force of the wind was violent on the 10th and the damage was enormous; but after the centre of the typhoon passed away, the damage was not heavy elsewhere. Only in the provinces of Shimosa, Awa, Musashi, and Sagami, the force of the wind was strong and the weather was stormy. L. B. 738 mm.

VI. *Continental depression of the 13th and 14th.*—Appeared in North China on the morning of the 13th and moved northeastwards. In the evening it passed over the Amour region, and passing over the northern part of the Japan Sea and the Island of Saghalien it entered the Sea of Okhotsk on the morning of the 14th. L. B. 755 mm.

VII. *Continental depression of the 13th and 14th.*—Came from the lower Yangtsekiang valley on the morning of the 13th, and made its way towards the northeast passing over the south of Quelpart Island at 2 p. m. In the evening it passed through the Korea strait and on the morning of the 14th it disappeared in the Japan Sea. L. B. 759 mm.

VIII. *Depression of the 14th to the 16th.*—This depression first appeared near Foochow on the morning of the 14th. On the next day, it passed over the sea off the west coast of Kiushu and then the Korea strait, thus entering the Japan Sea. Moving northeastwards it passed over Hakodate on the morning of the 16th and then touching Nemuro it passed away into the Pacific in the evening. L. B. 750 mm.

IX. *Continental depression of the 19th to the 21st.*—Appeared near the Gulf of Hangchow on the morning of the 19th. Passing through the Channel of Korea and travelling along the coast of the Japan Sea, the depression reached the sea off the bay of Wakasa on the evening of the 20th. Then moving directly northwards and crossing the Japan Sea and Saghalien Island, it entered the Sea of Okhotsk on the evening of the 21st.

L. B. 750 mm.

X. *Secondary depression of the 20th and 21st*—Appeared off the south coast on the night of the 20th and passed away northeastwards over the Ocean.

L. B. 750 mm.

XI. *Depression of the 20th to the 22nd.*—Appeared near Hachijojima on the night of the 20th and moved north-northwestwards. On the morning of the 21st it passed over the vicinity of Tokyo, whence it changed its course towards the NNE. On the morning of the 22nd the depression reached the sea off the southeastern portion of Hokkaido, and taking the east course it passed away over the Ocean. L. B. 750 mm.

XII. *Continental depression of the 23rd and 24th.*—Appeared in North China on the afternoon of the 23rd. Moving eastwards it passed over from the Amour region to the northern part of the Japan Sea on the morning of the 24th. It then moved northeastwards. L. B. 755 mm.

XIII. *Continental depression of the 23rd to the 25th.*—Appeared in the Yangtsekiang valley on the 23rd, and on the morning of the 25th it came to the sea off the southern part of Kiushu, whence with its course eastwards it passed away into the Pacific Ocean. L. B. 760 mm.

XIV. *Secondary depression of the 29th.*—On the morning of the 29th this secondary depression appeared on the northwest of Kofu and moved southeastwards. In the evening it entered the sea of Sagami. L. B. 755 mm.

November.—The number of the depressions that passed over Japan and its neighbouring seas during this month was 24, most of which were continental cyclones which came from North China Only one depression had a barometric reading lower than 740 mm.

I. *Continental depression of the 1st to the 3rd.*—On the afternoon of the 1st this depression came from Manchuria with its progressive motion southeastwards. In the evening it entered the Japan Sea, and on the night of the 2nd it passed through the Strait of Tsugaru Then crossing the eastern part of Hokkaido the depression entered the Sea of Okhotsk.

L. B. 758 mm.

II. *Continental depression of the 2nd to the 5th.*—Came from Manchuria on the evening of the 2nd and travelled southeastwards. On the night of the 3rd the depression entered the Japan Sea, whence moving eastwards it passed through the Tsugaru Strait on the afternoon of the 4th. On that night the depression passed off the southeastern part of Hokkaido and on the 5th went away towards the Pacific Ocean. L. B. 748 mm.

III. *Continental depression of the 4th and 5th.*—Reached the northern part of the Japan Sea on the night of the 4th, and disappeared near the west coast of Hokkaido on the next morning. L. B. 751 mm.

IV. *Continental depression of the 4th to the 7th.*—Came from Manchuria on the

night of the 4th and moved southeastwards at first. On the 5th it crossed the Japan Sea and the northern part of Honshu. On the morning of the 6th it appeared off the coast of the eastern part of Honshu, whence it moved northeastwards. On the evening of the same day it passed over the sea off the southeastern part of Hokkaido, and on the next morning it went away into the Pacific Ocean. It caused a storm in Hokkaido. The details will be given later. L. B. 725 mm.

V. *Secondary depression of the 5th.*—Appeared in the northern part of Honshu on the afternoon of the 5th and caused a thunderstorm. Then, moving southeastwards, on that night it passed the neighbourhood of Kinkazan and finally went away into the Pacific. L. B. 749 mm.

VI. *Continental depression of the 7th and 8th.*—Appeared on the morning of the 7th in North China, whence, moving eastwards it passed over the Gulf of Liaotung and the northern part of Korea. On that night it made its way northeastwards along the Siberian coast. On the morning of the 8th the depression passed the northern portion of the Japan Sea towards the Island of Saghalien. L. B. 747 mm.

VII. *Continental depression of the 9th and 10th.*—Appeared in North China on the afternoon of the 9th. Then, passing over the Amour region, it entered the northern portion of the Japan Sea, whence it moved northeastwards. On the afternoon of the 10th the depression entered the Sea of Okhotsk, by passing through the Strait of Soya. L. B. 753 mm.

VIII. *Continental depression of the 11th to the 13th.*—Appeared in North China on the night of the 11th, and moving northeastwards, passed over the Amour region. On the morning of the 13th, the depression was found in the northern part of the Japan Sea, and then crossing the southern extremity of Saghalien Island, it entered the Okhotsk Sea. L. B. 757 mm.

IX. *Continental depression of the 12th to the 14th.*—Appeared near the province of Shangtung on the night of the 12th and then in the Yellow Sea. On the afternoon of the 13th it landed near Chemulpo and crossed Korea, entering the Japan Sea. On the morning of the 14th the depression crossed the southern part of Hokkaido and then passed away towards the Pacific Ocean. L. B. 747 mm.

X. *Depression of the 13th and 14th.*—This depression, which appeared near the Chusan Islands on the morning of the 13th, moved northeastwards and on that afternoon it entered the Japan Sea. On the afternoon of the 14th it

appeared in the Sea off Noto, whence it changed its course to the east, and crossing the northern part of Honshu it entered the Pacific Ocean.
L. B. 750 mm.

XI. *Secondary depression of the 14th.*—Developed near Nagano on the forenoon of the 14th and moved southeastwards. Passing over Kumagaya and Tokyo, it entered the Sea off Boso, and on the afternoon of the 15th the depression passed away into the Pacific. L. B. 750 mm.

XII. *Secondary depression of the 15th.*—Developed near Kofu on the morning of the 15th, and moving towards the ESE it passed over the Sea off Choshi towards the Pacific. L. B, 749 mm,

XIII. *Continental depression of the 15th and 16th*—Appeared in North China on the afternoon of the 15th and moving southeastwards entered the Japan Sea. On the morning of the 16th the depression began to take its course eastwards, and passing over the northern part of Honshu, it entered the Pacific Ocean. L. B. 750 mm

XIV. *Continental depression of the 18th and 19th.*—Appeared in Manchuria on the morning of the 18th, whence it made its way towards the northern part of the Japan Sea. On the morning of the 19th the depression moved northeastwards, and crossing the northern part of Hokkaido on the afternoon, it entered the Okhotsk Sea. L. B. 761 mm.

XV. *Continental depression of the 19th.*—Came from North China on the early morning of the 19th and crossed the northern part of Korea. Entering the Japan Sea, the depression began to move northeastwards, and then passing through the Soya Strait it appeared to have entered the Okhotsk Sea. The details about the passage were not known, L. B. 763 mm.

XVI. *Continental depression of the 20th to the 22nd*—Appeared in North China on the afternoon of the 20th. Then, moving southwards, it crossed the peninsula of Liaotung and also the northern part of Korea, whence it travelled eastwards. On the morning of the 22nd the depression arrived at the centre of the Japan Sea, whence its course changed to the northeast and passed through the Tsugaru Strait. Finally it went off towards the Pacific Ocean. L. B. 749 mm.

XVII. *Secondary depression of the 22nd.*— Developed near Kofu on the morning of the 22nd and moving southeastwards it went off the coast of Boshu on the evening. L. B. 753 mm.

XVIII. *Continental depression of the 21st and 22nd.* Appeared on the 21st in the Amour region, whence it moved directly eastwards and appeared in

the northern part of the Japan Sea. On that night it reached the Sea off the west coast of Hokkaido and thence it proceed northeastwards, passing over the neighbourhood of Soya and entering the Sea of Okhotsk on the morning of the 22nd. L. B. 753 mm.

XIX. *Continental depression of the 24th and 25th.*—Appeared in North China on the morning of the 24th. Moving towards the east, the depression entered the Sea of Japan, and on the 25th it traversed Hokkaido. On that night the depression left towards the Pacific Ocean. L. B. 755 mm.

XX. *Continental depression of the 25th.*—This appeared in the Gulf of Tartary on the morning of the 25th. Then it traversed the Island of Saghalien, and on that afternoon it passed over the Sea of Okhotsk southeastwards.
L. B. 752 mm

XXI. *Continental depression of the 25th to the 27th.*—On the morning of the 25th it appeared in Manchuria, whence it moved towards the Japan Sea, reaching its central portion on the morning of the 26th. It then moved eastwards, and on that afternoon it traversed the northern portion of Honshu, whence its course changed to the northeast. The depression left towards the Pacific Ocean L. B. 746 mm.

XXII. *Depression of the 26th.*—Appeared far off on the southwest of Hachijojima on the morning of the 26th and then it passed over the neighbourhood of the Islands. Finally it disappeared towards the northeast. The details about its passage were not known. L. B. 753 mm.

XXIII. *Continental depression of the 27th and 28th.*—Started from North China eastwards on the morning of the 27th. On that night it entered the northern part of the Japan Sea, whence it moved slowly northeastwards On the afternoon of the 28th it entered the Okhotsk Sea. L. B. 753 mm.

XXIV. *Depression of the 29th to the 1st of December.*—Appeared far off on the southeast of Formosa on the morning of the 29th. Moving slowly northeastwards it passed east of Riukiu on the afternoon of the 30th. And on the night of the 1st of December the depression passed over the Sea off Boshu towards the Pacific. L B. 760 mm.

XXV. *Depression of the 30th.*—Appeared far off on the west of Ogasawara, whence it moved northwestwards. On the afternoon of the 30th it reached somewhere near the latitude 32° N. and thence its passage took the northeast course. It appeared to have passed over the Sea off Boso and left towards the Pacific; but as this depression was passing far off the coast, its passage was not definitely known. L. B. 761 mm.

December.—The total number of the depressions that passed over Japan and its neighbouring seas was 19, of which 5 appeared on the Pacific coast, 9 came from China, 3 appeared in the Gulf of Tartary and left towards the Sea of Okhotsk, 1 appeared in the northern part of the Japan Sea, and the remaining 1 was a secondary depression that appeared in the sea east of the northern part of Honshu. Of those that came from China, 1 traversed the western part of Honshu. 2 traversed the northern part of Honshu, and 6 crossed Hokkaido. There was only one depression that showed its barometric readings below 740 mm.

I. *Continental depression of the 1st and 2nd.*—Appeared in the Gulf of Tartary on the afternoon of the 1st and then it traversed Saghalien Island. On the afternoon of the 2nd it appeared in the eastern part of the Sea of Okhotsk. L. B. 757 mm.

II. *Continental depression of the 2nd to the 4th.*—This depression appeared in Manchuria on the afternoon of the 2nd, and moving southeastwards it entered the Japan Sea on the night of the 3rd. Then its course changed towards the northeast, and on the afternoon of the 4th it crossed the northern part of Hokkaido. On that night it entered the Okhotsk Sea L. B. 742 mm.

III. *Depression of the 4th.*—Appeared far off on the west of Hachijojima, whence it moved northeastwards. On the afternoon of the 4th the depression appeared far off the peninsula of Boso, and finally left towards the Pacific. L. B. 754 mm.

IV. *Continental depression of the 5th to the 8th.*—On the night of the 5th this depression moved southeastwards from North China, and on the night of the 6th it crossed the peninsula of Liaotung. On the afternoon of the 7th the depression traversed through the central part of Korea, and entered the Japan Sea. Moving northeastwards, it passed over the southern part of Hokkaido on the afternoon of the 8th, and finally entered the Pacific Ocean on the next morning. L. B. 742 mm.

V. *Secondary depression of the 8th.*—Developed in the sea far off on the southeast of Shiriyasaki on the afternoon of the 8th, and moved northeastwards. L. B. 748 mm.

VI. *Continental depression of the 9th to the 11th.*—On the afternoon of the 9th the depression appeared in North China, whence it made its way towards the southeast. On the afternoon of the 10th it entered the Japan Sea, and thence it moved northeastwards. On the afternoon of the 11th the depression traversed the northern part of Hokkaido, and then entered the Okhotsk Sea. L. B. 750 mm.

VII. *Continental depression of the 11th and 12th.*—This depression appeared to have developed in the province of Kiangsu in China. On the morning of the 11th it passed through the Korea Strat, and then it landed on the neighbourhood of Shimonoseki, whence it moved eastwards. On the morning of the 12th it passed over Kyoto, Hikone, and the neighbourhood, and on the afternoon of the same day, went out at Numazu into the bay of Sagami. It finally passed over the Sea off Boshu towards the Pacific.

L. B. 760 mm.

VIII. *Depression of the 12th to the 17th.*—Started on the afternoon of the 12nd from South China slowly northeastwards. On the afternoon of the 14th it passed through the Channel of Iki and on the morning of the 16th the depression reached the central part of the Japan Sea. On the morning of the 17th it crossed the northern part of Hokkaido and on that afternoon it entered the Okhotsk Sea. L. B. 750 mm.

IX. *Depression of the 13th to the 16th.*—Appeared far off on the southeast of the Islands of Yayeyama on the afternoon of the 13th and moved northeastwards. On the morning of the 15th it came to the offing of the south coast, whence it moved directly eastwards On the morning of the 16th it left for the Pacific Ocean. L. B. 757 mm.

X. *Continental depression of the 17th and 18th.*—Appeared in the Gulf of Tartary on the night of the 17th and then traversing Saghalien Island it entered the Okhotsk Sea on the night of the 18th. L. B. 748 mm.

XI. *Continental depression of the 19th.*—Came from the Island of Saghalien on the afternoon of the 19th, and passing over the Okhotsk Sea southeastwards, it entered the Pacific Ocean. L. B. 740 mm.

XII. *Continental depression of the 20th to the 22nd.*—Appeared in the Yangtsekiang valley, and on the night of the 20th it passed through the Korea Strait moving towards the Japan Sea. On the night of the 21st the depression crossed the middle of Hokkaido and on the afternoon of the next day it entered the Pacific. L B. 757 mm.

XIII. *Depression of the 20th and 21st.* — Appeared far off the south coast, and on the night of the 20th it passed south of Hachijojima. On the afternoon of the 21st it went away eastwards. L. B. 757 mm.

XIV. *Continental depression of the 22nd and 23rd.*—This depression appeared in the province of Shangtung in China, whence it moved eastwards. Traversing the middle of Korea, it reached the Japan Sea On the morning of the 22nd it was found in its central part, whence it moved northeast-

wards. On the 23rd the depression crossed Hokkaido and entered the Pacific Ocean. L. B. 748 mm.

XV. *Depression of the 22nd to the 27th.*—Appeared in the sea southeast of Riukiu on the morning of the 22nd. Making its way northeastwards the depression came to the offing of the peninsula of Boso, whence it moved northwards along the Pacific coast On the 23rd, it passed over the Sea off the southeastern part of Hokkaido, and thence it went away towards the Pacific. This depression caused stormy weather all over the northern part of Honshu, and a violent snow storm in Hokkaido. L. B. 736 mm.

XVI. *Continental depression of the 25th to the 27th.*—Appeared in North China on the afternoon of the 25th and traversing the peninsula of Liaotung and Korea, it travelled eastwards. On that night it was located in the central part of the Japan Sea. On the morning of the 27th the depression crossed the northern part of Honshu, and passed away into the Pacific.

L. B 756 mm.

XVII. *Continental depression of the 29th and 30th.*—Came from the province of Shangtung in China, and on the morning of the 29th it passed over the Yellow Sea and the southern part of Korea. On that afternoon it entered the southern portion of the Japan Sea and thence moved northeastwards. On the night of the 29th it passed off Noto and on the afternoon of the 30th it entered the Pacific, by crossing the northern part of Honshu.

L. B. 750 mm.

XVIII. *Continental depression of the 29th.*—On the afternoon of the 29th it appeared in the northern part of the Japan Sea. On that night it then travelled towards Saghalien Island. L. B. 762 mm.

XIX. *Depression of the 30th.*—Came from the sea far off the south coast. On the morning of the 30th it appeared to have travelled northeastwards far off the coast of the peninsula of Boso. But this depression was so far off the coast of Japan that the details about its passage could not be definitely known. L. B. 757 mm.

II. REMARKABLE TYPHOONS.

1. Typhoon of July 8th to 11th.

The birth place of this typhoon could not be located definitely; but it appeared to have originated in the neighbourhood of the islands of Mariana. In the beginning it moved towards the N N W, but at the latitude 28° N its course changed to the N N E. On the afternoon of the 8th the typhoon appeared in the sea off Shikoku, and on the morning of the 9th it approached Murotosaki. At this time the barometer fell rapidly in the western part of Honshu, and a storm prevailed all over Tokaido. The centre of the typhoon travelled northeastwards, and on that night it landed on the southeastern part of the peninsula of Kii. At nearly 2 a. m. on the 10th it was found on the east of Wakayama, and at 6 a. m. approached Hikone. On the afternoon of the same day the depression passed the neighbourhood of Sado and Akita. Thence it made its way towards Cape Erimo and touched the eastern part of Hokkaido. On the morning of the 11th the typhoon entered the Okhotsk Sea. The details as to the positions of the centre, the directions and velocities of its progressive motion are given in the following table.

Date	Hour	Latitude	Longitude	Direction	Velocity
8th	6 a.m.	24° 30′N	133° 45′E	NNW	80.8 km.p.h
,,	2 p.m.	30° 15′	133° 30′	NNE	18.7
9th	6 a.m.	32° 50′	134° 40′	NE	8.2
,,	10 p.m.	33° 50′	135° 20′	NE	21.2
10th	6 a.m.	35° 10′	136° 20′	NE	38.4
,,	2 p.m.	37° 35′	138° 05′	NE	62.8
,,	10 p.m.	41° 10′	141° 55′	NE	76.7
11th	6 a.m.	45° 35′	146° 30′	NE	

When the centre of the typhoon landed on the peninsula of Kii on the night of the 9th, the depression became intense remarkably and it caused a violent storm. In the central part of Honshu, rivers overflowed their banks, bridges fell, and houses were thrown down. Damage to crops was not small. But in the north of the central part of Honshu there was not much damage.

At Nagoya, a storm came early on the morning of the 10th, and the barometer began to fall rapidly. At 5h 13m a.m. on that day, the greatest wind velocity was 28.9 metres per second; at 6h 25m a.m. the lowest barometric reading was 741.8 mm. The duration of the violent wind was about 8 hours (2 a. m. of the 10th to 9 a.m.), and the total amount of rainfall for 6 hours from 4 a.m. to 10 a.m. was 105 m m.

The observations at the Nagoya meteorological station are given in the following table :—

Date	Hour	Barometer	Wind direct.	Wind Vel.	Rainfall	Weather
10th	1 a.m.	748.3 mm.	E	9.3 m.p.s.	4.1	rain
,,	2 a.m.	747.4	ESE	11.4	4.0	,,
,,	2 30 a.m.	746.8	—	—	—	,,
,,	3 a.m.	746.4	ESE	13.1	4.3	,,
,,	3 20 a.m.	746.0	ESE	16.0	—	,,
,,	3 30 a.m.	745.7	—	—	—	,,
,,	3 40 a.m.	—	ESE	17.2	—	,,
,,	4 a.m.	745.0	ESE	15.3	9.3	,,
,,	4 20 a.m.	744.6	ESE	20.3	—	heavy rain
,,	4 30 a.m.	743.7	—	—	—	,,
,,	4 40 a.m.	—	ESE	10.2	—	,,
,,	5 a.m.	743.1	ESE	23.4	25.2	,,
,,	5 20 a.m.	742.7	ESE	24.9	—	,,
,,	5 40 a.m.	742.4	ESE	19.0	—	,,
,,	6 a.m.	741.9	ESE	15.0	29.5	,,
,,	6 25 a.m.	741.8	—	—	—	,,
,,	7 a.m.	741.9	SE	21.2	16.5	,,
,,	8 a.m.	743.1	SSE	17.2	17.2	,,
,,	9 a.m.	744.1	SSE	16.6	8.7	,,
,,	10 a.m.	745.5	S	6.0	8.1	rain
,,	11 a.m.	747.2	S	8.5	5.4	,,
,,	Noon	747.4	SSW	10.0	0.0	cloudy
,,	1 p.m.	749.3	SW	8.8	0.0	,,
,,	2 p.m.	749.9	SW	5.1	—	,,
,,	3 p.m.	750.1	S	4.2	—	,,
,,	4 p.m.	750.6	S	3.6	—	,,
,,	5 p.m.	751.0	S	4.0	0.0	slight rain
,,	6 p.m.	751.6	SW	4.0	0.3	,,

At Osaka the barometer fell slowly on the morning of the 9th and a fresh northeast wind blew. At 9 a.m. the wind force became violent, and since the midnight the barometer fell so rapidly that at 3h 30m a.m. on the 10th it was as low as 737.5 mm. At 1h 30m a.m. the wind velocity was 24 m.p.s. The duration of the violent wind was almost 23 hours. The amount of rainfall was not great.

According to the observation of the Kofu meteorological station, the rainfall during 5 days from the 8th to the 12th was abnormally great for the season. Rivers overflowed their banks ; embankments were broken ; farms and houses were covered with water ; bridges were carried away. The communication of provincial and prefectural roads was cut off for a time. Railroads were broken and traffics were temporarily suspended.

The amounts of rainfall from the 8th to the 12th in the different places in that prefecture were as follows :—

Sugahara-mura, Kita Koma County	278 mm.
Iino-mura, Naka Koma County	356 „
Hikage-mura, Higashi Yatsushiro County	378 „
Nirasaki-machi, Kita Koma County	307 „
Kofu	308 „
Kajikasawa-mura, Minami Koma County	531 „
Nakano-mura, Minami Tsuru County	762 „
Yamura-machi, Minami Tsuru County	432 „
Kami Kuishikimura, Nishi-Yastsuhiro County	530 „
Ohara-mura, Kita Tsuru County	445 „

As above mentioned, the region which had the greatest rainfall was the south-western counties of the prefecture. The north western and eastern counties had the least amount. In the Kamanashi river the water did not increase much, but in such rivers, as Fuefuki and Katsura, there was a great increase of water. The greatest rainfall in Kofu occurred during the one hour from 8 a. m. to 9 a. m. on the 9th, and according to the self-recording raingauge there was a rainfall of 20 mm. per half an hour. But the change of the barometer was very small, and the wind force was also moderate.

The observations at the several stations which were situated near the track of the typhoon were as follows :—

Station	Lowest barometer	Time	Max. Wind Vel.	Wind direction	Time
Tokushima	741.3 mm.	10th, 1h a.m.	14.0 m.p.s.	NW	10th, 1 a.m.
Wakayama	736.4	10th, 2h a.m.	19.1 „	NNE	10th, 1h 30m a.m.
Kobe	738.3	10th, 2h 30ma.m.	20.0 „	E	9th, 11h 20m p.m.
Osaka	737.5	10th, 3h 30m a.m.	24.0 „	NE	10th, 1h 30m a.m.
Kioto	737.5	10th, 5h a.m.	14.3 „	SE	10th, 2h a.m.
Yagi	735.1	10th, 3h a.m.	18.2 „	NE	10th, 1h a.m.
Tsu	737.9	10th, 4h 30m&5h a.m.	19.1 „	ESE	10th, 3h a.m.
Gifu	741.1	10th, 7h 30m a.m.	28.8 „	SE	10th, 7h a.m.
Nagoya	741.8	10th, 6h 25m a.m.	28.9 „	ESE	10th, 5h 13m a.m.
Kumagae	748.6	10th, 3h p.m.	24.3 „	SSE	10th, 2h p.m.
Matsumoto	746.1	10th, 1h p.m.	13.6 „	SSE	10th, 2h p.m.
Hikone	738.3	10th, 6h a.m.	14.7 „	ESE	10th, 4h a.m.
Kanagawa	743.8	10th, 9h a.m.	5.5 „	W	10th, 2h p.m.
Fushiki	744.0	10th, 10h a.m.	18.0 „	N	10th, Noon.

2. *Typhoon of July 25th to 27tn.*

On the night of the 24th the barometer rose all over Honshu and the southwestern islands; but in Riukiu and Ishigakijima the barometer fell slightly, showing that a typhoon was approaching from the direction of the Yayeyama Islands. At 10h a.m. on that day a north easterly heavy wind blew in Ishigakijima, and early on the morning of the 25th the weather was threatened with rain. At 5h 55m a.m. there was a thunderstorm. The rainfall during one hour was 16.7 mm. The barometer fell rapidly, and the weather was becoming bad; but in the southwestern islands the weather was still clear. The observations made at the stations in the southwestern islands at 6 a. m. on the 25th are given in the following table:—

Station	Barometer	Change in barometer since previous 8 hours	Wind direct.	Wind force	Weather
Koshun	754.2	−1.3	N	2	fair
Pescadores	754.6	−1.0	N	1	,,
Taihoku	754.6	−0.9	—	0	clear
Ishigakijima	747.0	−5.3	NE	4	rain
Naha	754.6	−0.5	E	3	fair
Oshima	757.7	−0.2	SE	1	,,

The centre of the typhoon came to the south of Ishigakijima on the afternoon of the 25th, and touching the southwestern coast of the island on the early morning of the 6th, it moved towards the NNW. On the evening it was found on the north of Formosa and on the afternoon of the 27th the typhoon entered the continent from the neighbourhood of the gulf of Wenchow. On that night it passed near Hanchow. Now the positions of the centre, and the directions and velocities of its progressive motion are given in the following table:—

Date	Hour	Latitude	Longitude	Direction	Velocity
25th	6 a.m.	20°55′ N	124°50′ E	NNW	14.7 k.p.h.
,,	2 p.m.	21°50′	124°15′	NNW	8.2
,,	10 p.m.	22°20′	124°	NNW	19.6
26th	6 a.m.	23°40′	123°30′	NNW	12.2
,,	2 p.m.	24°30′	123°05′	NNW	17.1
,,	10 p.m.	25°35′	122°30′	NNW	16.3
27th	6 a.m.	26°40′	122°	NNW	22.8
,,	2 p.m.	28°10′	121°20′	NNW	28.6
,,	10 p.m.	30°	120°30′	NNW	

When the typhoon was approaching, the progressive motion of the centre was very slow and its speed was only 10 kilometres per hour. But after it passed over

the north of Formosa, the speed was 30 kilometres per hour, and it rapidly increased as the centre travelled northwards.

The barometer fell rapidly since the afternoon of the 25th in Ishigakijima, and violent wind mingled with rain increased its force. The anemometer showed 30 metres per second. At 9h 40m p.m. the speed of the wind reached 44.1 metres per second; at 3h 30m a.m. on the 26th the barometric reading was 729.4 mm. which was the lowest; at 3h 40m a.m. the speed of the wind was the greatest, being 55.6 metres per second. The duration of the hurricane was about 21 hours from 2 p. m. of the 25th to 11 a.m. of the 26th. It was fortunate that this typhoon was not accompanied by a heavy rainfall. An extract of the observations made at the Ishigakijima meteorological station is given in the following table :—

Date	Hour	Barometer	Wind direct.	Wind vel.	Rainfall	Weather
25th	6 p.m.	738.1 mm	ENE	30.7m.p.s.	2.0	rain
,,	7 p.m.	736.9	NE	37.7	2.5	,,
,,	8 p.m.	735.3	ENE	34.8	11.0	,,
,,	9 p.m.	735.2	ENE	39.1	2.1	,,
,,	10 p.m.	734.2	ENE	41.3	1.0	,,
,,	11 p.m.	733.4	E	34.8	2.2	,,
,,	Midnight	732.3	E	34.9	0.6	,,
26th	0. 20 a.m.	731.7	E	40.1	—	,,
,,	0. 40 a.m.	731.1	E	25 2	—	,,
,,	1. a.m.	731.0	E	34.0	0.1	,,
,,	1. 20 a.m.	730.3	E	35.9	—	,,
,,	1. 40 a.m.	729.9	E	35.9	—	,,
,,	2. a.m.	729.9	ESE	35.9	0.0	,,
,,	2. 20 a.m.	729.8	ESE	36.7	—	,,
,,	2. 40 a.m.	729.8	ESE	34.2	—	,,
,,	3. a.m.	729.7	ESE	37.6	0.0	,,
,,	3. 20 a.m.	729.6	SE	34.4	—	,,
,,	3. 30 a.m.	729.4	SE	46.2	—	,,
,,	3. 40 a.m.	730.1	SE	55.6	—	,,
,,	4. a.m.	730.6	SE	45.4	0.2	,,
,,	4. 20 a.m.	731.4	SE	50.1	—	,,
,,	4. 40 a.m.	731.8	SE	31.8	—	,,
,,	5. a.m.	732.4	SSE	37.4	0.2	,,
,,	5. 20 a.m.	732.8	SSE	44.5	—	,,
,,	5. 40 a.m.	733.2	SSE	38.6	—	,,
,,	6. a.m.	733.6	S	40.7	0.5	,,
,,	6. 20 a.m.	735.5	S	48.2	—	,,

Date	Hour	Barometer	Wind direct.	Wind vel.	Rainfall	Weather
„	6. 40 a.m.	736.8	S	40.2	—	„
„	7. a.m.	737.4	SSE	43.7	0.1	„
„	7. 20 a.m.	737.7	S	36.7	—	„
„	7. 40 a.m.	738.1	S	45.7	—	„
„	8. a.m.	739.0	S	39.7	1.3	„
„	9. a.m.	740.2	S	37.7	4.7	„
„	10. a.m.	742.1	S	44.6	1.5	„
„	11. a.m.	743.0	S	31.6	0.5	„
„	Noon	744.0	S	28.2	1.1	„

While the typhoon was passing, the barometer showed such low readings as mentioned above in Ishigakijima. The force of the wind was tremendous, but it was restricted to a small area. After the cyclone centre passed the neighbourhood of Ishigakijima, the force of the wind suddenly declined so that its disastrous effects were limited within this island.

Now the minimum barometric readings and maximum wind velocities observed at the stations which were situated near the track of the cyclone centre are given in the following table :—

Station	Lowest barometer	Time	Max. Wind Vel.	Wind direct	Time
Taito	740.4	26th, 4 & 6 p.m.	19.1 m.p.s.	SSW	27th, 8 a.m.
Taichu	746.4	27th, 2 & 3 a.m.	16.0	NW	26th, 1 p.m.
Taihoku	744.9	27th, 5 a.m.	13.5	N	26th, 7 a.m.
Ishigakijima.	729.4	26th, 3. 30 a.m.	55.6	SE	26th, 3.40 a.m.
Oshima	756.1	26th, {3 & 4 p.m. / 5 & 6 p.m.}	7.2	SSE	26th, 3 p.m.

3. *Typhoon of August 12th to 18th.*

This typhoon developed in the sea far east of Luzon on the 12th. In the Riukiu islands, and Formosa, a heavy wind blew from the northeast, the barometer fell slightly, and the weather was critical on the 14th. On the morning of the 15th the typhoon came to the south of the Yayeyama islands, whence it moved towards the NNW. At 4 p.m. on that day it touched the western portion of the group of the islands and then travelled northwards. When the centre of the typhoon reached the latitude 28° N its course changed to the northeast direction. On the night of the 18th it traversed Korea diagonally and entered Manchuria.

The positions of the cyclone centre, the directions and speeds of its progressive motion are given in the following table :—

Date	Hour	Latitude	Longitude	Direction	Velocity
15th	6 a.m.	21°30′N	124° E	NNW	36.7 km.p.h.
„	2 p.m.	24°07′	123°30′	NNW	16.3
„	10 p.m.	25°20′	123°25′	N	6 5
16th	2 p.m.	26°15′	123°20′	N	16.3
„	10 p.m.	27°20′	123°20′	N	17.1
17th	2 p.m.	29°45′	123°30′	N	43.3
„	10 p.m.	32°50′	124°25′	NNE	19.6
18th	6 a.m.	34°07′	125°	NNE	25.3
„	2 p.m.	35°55′	125°50′	NNE	45.7
„	10 p.m.	38°55′	127°30′	NE	

In Ishigakijima island the weather began to be stormy since the morning of the 15th. Lower clouds moved fast from the southeast, the barometer fell rapidly at a rate of 1 mm. per hour, and a violent easterly wind blew. At 4 p.m. on the same day the barometric reading was 735.5 mm. which was the lowest, and the wind direction changed to the south. At 4h 20m p.m. the wind velocity was 48.2 m.p.s. From 11 a.m. of the 15th to 9 p.m. of the same day a hurricane continued to blow with a speed of 30 m.p.s. and upwards.

An extract of the meteorological observations made at the Ishigaki meteorological station during the passage of the typhoon is given in the following table :—

Date	Hour	Barometer	Temperature	Wind direct.	Wind Vel.	Rainfall
15th	1 a.m.	748.4	25.5	E	18.5 m.p.s.	0.0
„	2	747.6	26.0	E	18.3	0.0
„	3	747.0	26.2	E	18.7	—
„	4	746.6	26.1	E	19.5	—
„	5	746.6	24.6	E	19.0	0.6
„	6	745.8	25.7	E	18.8	0.1
„	7	745.6	26.9	E	21.1	0.0
„	8	745.4	26 6	E	23 4	0.0
„	9	744.6	27.1	E	23.2	0.1
„	10	743.6	25.1	E	25.7	0.1
„	11	742.3	24.7	ESE	29.6	0.3
„	Noon	740.5	24.5	SE	33.6	1.5
„	0. 20 p.m.	739.6	24.1	SE	40.9	—
„	0. 40	739.0	24 3	SE	36.2	—
„	1	738.1	24.3	SE	45.3	1.1
„	1. 20	737.2	24.3	SE	—	—
„	1. 40	737.0	24.1	ESE	38.0	—

Date	Hour	Barometer	Temperature	Wind direct.	Wind Vel.	Rainfall
,,	2	736.4	24.1	SE	36.5	1.2
,,	2.20	736.2	24.5	SE	38.5	—
,,	2.40	736.1	24.5	SE	38.8	—
,,	3	735.8	24.6	SE	38.4	5.0
,,	3.20	735.7	24.5	SSE	40.1	—
,,	3.40	735.7	24.4	SSE	45.7	—
,,	4	735.5	24.0	SSE	43.4	6.0
,,	4.20	735.6	23.9	S	44.0	—
,,	4.40	735.9	23.9	S	48.2	—
,,	5	735.7	24.3	S	46.9	4.8
,,	5.20	736.1	24.5	S	44.3	—
,,	5.40	736.7	24.4	S	42.3	—
,,	6	737.0	24.3	S	44.5	3.4
,,	7	739.1	24.1	SW	43.2	7.3
,,	8	741.8	24.0	SW	38.5	26.0

At Moukpo on the southwestern coast of Korea a strong wind blew from the ESE since the morning of the 17th. On that afternoon the weather was threatened with rain, and on the morning of the 18th the barometer did rapidly fall, the wind force becoming fierce gradually. At 9 a.m. of the same day the barometer was the lowest which was 732.9 mm., while the wind velocity was 42.4 metres per second. From 1 a.m. of the 18th to 1 p.m. of the same day the violent wind of over 20 metres per second continued to blow. The meteorological observations made at Moukpo during the passage of the cyclone were as follows:—

Date	Hour	Barometer	Temperature	Wind direct.	Wind vel.	Rainfall	weather
18th	0. 30 a.m.	743.9mm	24.2	SE	19.4m.p.s.	0.6	rain
,,	1	743.2	24.2	SE	21.0	2.5	,,
,,	1.30	742.1	24.2	ESE	21.5	3.7	,,
,,	2	741.6	23.8	ESE	22.9	3.7	,,
,,	2 30	740.6	24.0	FSE	23.3	4.1	,,
,,	3	740.2	23.7	SE	24.0	4.7	,,
,,	3.30	739.5	23.6	ESE	28.6	2.5	,,
,,	4	739.2	23.0	SE	32.4	6.0	,,
,,	4 30	738.6	22.6	SE	32.1	10.7	,,
,,	5	738.1	22 6	SE	34.1	4.1	,,
,,	5.30	737.0	22.6	SE	29.6	1.6	,,
,,	6	735.9	22.8	SE	—	3.7	,,
,,	6.30	735 6	22.8	SE	—	0.8	,,

,,	7	734.5	22.8	ESE	—	1.0	,,
,,	7.30	733.9	23.0	ESE	39.7	1.9	,,
,,	8	733.5	23.2	SE	38.8	2.5	,,
,,	8.30	733.0	23.1	SE	36.9	0.3	,,
,,	9	732.9	23.2	SE	42.4	0.2	,,
,,	9.30	734.3	23.8	SSE	42.1	0.1	,,
,,	10	735.7	23.7	S	40.6	0.1	,,
,,	10.30	736.8	24.0	S	40.1	0.0	,,
,,	11	738.6	24.1	SSW	41.1	0.0	,,
,,	11.30	740.1	23.8	S	34.7	0.0	,,
,,	Noon	741.4	23.6	S	31.2	0.0	,,
,,	1 p.m.	743.4	23.2	S	20.2	0 3	,,

On the 18th there prevailed a violent south or southeast wind with rain all over Kiushu. In Nagasaki the wind velocity was 25 metres per second at 10 a.m. on that day. There wasn't, however, much damage in all places.

The lowest barometric readings and the maximum wind velocities observed at the stations situated on the track of the typhoon are given in the following table :—

Station	Lowest barometer	Time	Maximum wind vel.	Wind direct.	Time.
Koshun	745.7	15th, 4 & 5 p.m.	15.0 m.p.s.	NW	15th, 9 p.m.
Pescadores	747.2	15th, 3 a.m.	20.8	N	15th, 3 p.m.
Taichu	746.6	15th, 3 & 4 p.m.	11.6	N	15th, 4 p.m.
Taihoku	746.2	16th, 4 a.m.	14.4	NW	15th, Midnight.
Ishigakijima	735.5	15th, 4 p.m.	48.2	S	15th, 4h 40m p.m.
Oshima	751.7	17th, 4 p.m.	10.2	SE	17th, 11 a.m.
Kagoshima	752.7	17th, 6 p.m.	12.0	SSE	17th, 10 p.m.
Kumamoto	751.6	17th, 3 p.m.	16.6	SE	17th, 5 p.m.
Nagasaki	751.3	17th, 3 p.m.	25.7	S	18th, 11 a.m.
Itsugahara	749.7	18th, 4 a.m.	16.7	S	18th, 10 a.m.
Mokpo	732.9	18th, 9 a.m.	42.4	SE	18th, 9 a.m.
Chemulpo	739.6	18th, 5h 30m p.m.	13.3	W	18th, Midnight
Wonsan	743.6	18th, 10p.m.	15.0	E	18th, 8 p.m.

4. *Typhoon of August 18th to 21st.*

This typhoon which appeared near the Marshall Islands on the 18th made its way towards the north-west, and on the morning of the 19th it approached the eastern part of Riukiu. At that time, the barometer began to fall rapidly and a strong northerly wind blew in Amami-oshima and Riukiu. The barometer fell also in

Formosa and on the southern coast of Honshu where the weather was threatening. The centre of the typhoon moved northwards, after touching Amami-oshima at 3h 20m p.m. of the same day. On the morning of the 20th it reached the sea west of Kiushu, and then moving towards the NNE, it landed on the neighbourhood of Masanpo, on that afternoon. The centre, then, crossed the southern part of Korea diagonally, and on the night of the 21st it passed over the neighbourhood of Vladivostock towards the Amour regions.

The positions of the cyclonic centre, and the directions and velocities of its progressive motion are given in the following table :—

Date	Hour	Latitude	Longitude	Direction	Velocity.
19th	6 a.m.	25°25′N	131°40′	NW	34.3 km.p h.
,,	2 p m.	27°35′	130°20′	NW	31.0
,,	10 p.m.	29°35′	129°10′	NNW	34.3
20th	6 a.m.	31°50′	128°10′	N	39.2
,,	2 p.m.	34°40′	128°20′	NNE	55.5
,,	10 p.m.	38°30′	130°	N	25.3
21st	6 a.m.	40°20′	130°05′	N	

At Nase in Amami Oshima the barometer showed 750 mm. and a fresh northerly wind blew, accompanied by some rain, at 6 a.m. on the 19th. But as the centre of the typhoon approached, the barometer fell suddenly and the wind force increased rapidly. At the noon of that day, the barometric height was 739.3 mm. and the wind velocity was 30 meters per second. The storm became more fierce, and at 2h 45m p.m. the wind velocity was 43.1 m.p.s., and at 3h 15m p.m the barometer became lowest, being 709.4 mm. Since 2h 58m p.m., however, the wind force declined suddenly and at 3h 30m it was only 3.3 m.p.s. The wind backed from the north to the south over NW, and wind force again increased. At 4h 45m the anemometer showed 29 3 m.p.s. On the 20th the weather was restored.

An extract of the meteorological observations taken at Nase during the passage of the typhoon is given below :—

Date	Hour	Barometer	Temperature	Wind direct.	Wind vel.	Rainfall	Weather
19th	10 a.m.	745.8mm	26.2	N	19.0	10.9	rain
,,	11 a.m.	743 2	26.0	N	24.6	11.5	,,
,,	11.30 a.m.	741.4	25.7	N	—	—	,,
,,	Noon	739.3	25 4	N	30.1	18.7	,,
,,	0.30m p m.	737.1	24.9	N	32.2	—	,,
,,	1 p.	734.3	24.9	N	35.1	24 4	,,
,,	1.15 p.m.	732.8	25.1	N	39.0	—	,,

Date	Hour	Barometer	Temperature	Wind direct.	Wind vel.	Rainfall	Weather
,,	1.30 pm	731.1	25.1	N	34.1	—	,,
,,	1.45 pm	729.1	25.2	N	36.4	—	,,
,,	2 pm	727.0	25.3	N	33.5	9.9	,,
,,	2.15 pm	724.1	—	N	37.9	—	,,
,,	2.30 pm	720.8	—	N	40.2	—	,,
,,	2.45 pm	716.2	—	N	43.1	—	,,
,,	3 pm	711.7	25.0	NW	41.8	19.6	,,
,,	3.15 pm	709.4	25.5	NW	15.4	—	,,
,,	3.30 pm	709.6	25.6	W	3.3	—	,,
,,	3.45 pm	709.7	25.7	SW	6.2	—	,,
,,	4 pm	711.2	25.6	S	9.4	0.4	,,
,,	4.15 pm	713.5	25.5	SSW	24.0	—	,,
,,	4.30 pm	714.6	25.7	S	27.7	—	,,
,,	4.45 pm	718.8	26.0	S	29.3	—	,,
,,	5 pm	722.7	26.2	S	27.0	11.1	,,
,,	5.15 pm	725.0	26.5	S	27.7	—	,,
,,	5.30 pm	726.4	26.6	S	20.5	—	,,
,,	5.45 pm	728.1	26.5	S	21.4	—	,,
,,	6 pm	729.4	26.5	SSW	20.6	3.3	,,
,,	6.15 pm	730.3	—	S	20.1	—	,,
,,	6.30 pm	732.0	—	S	19.2	—	,,
,,	6.45 pm	733.3	—	S	19.2	—	,,
,,	7 pm	734.9	26.3	S	21.1	16.3	,,
,,	7.30 pm	737.7	—	SSW	19.5	—	,,
,,	8 pm	740.3	26.3	SSW	15.9	11.9	,,
,,	8.30 pm	741.9	—	S	13.6	—	,,
,,	9 pm	743.3	25.7	S	13.5	11.0	,,
,,	9.30 pm	744.6	—	S	13.9	—	,,
,,	10 pm	745.8	26.1	S	11.7	11.7	,,

In the western part of Honshu a storm began since the afternoon of the 19th. Especially in Kiushu the wind and rainfall were most fierce, and caused much damage to lives, properties and crops. In Masanpo and Fusan since the morning of the 20th a violent storm visited, followed by storm waves, which inflicted great damage upon houses and ships.

According to the report of the Kagoshima meteorological station, the centre of the typhoon passed the neighbourhood of Kikaigashima island, causing there such disastrous damage as had never been seen there before. In Wankata there were 1

destroyed school building, 2 partially destroyed school buildings, 172 destroyed houses, and 326 partially destroyed houses. Farms along the coast were covered with water and much damage was caused to crops. Since the villages in Hayamachikata are situated on the coast facing to the northeast, the force of the wind was much more fierce than in Wankata. Here 1 school building was destroyed, and 590 houses entirely and 440 houses partially were destroyed; 50 houses were carried away by flood. Water came up to the floors of 700 houses.

At Fusan the barometer fell to 754.2 mm. at 2 a.m. on the 20th, when a fresh northeast wind blew and the weather was clear. But after 10 a.m. the barometer fell rapidly and began to rain, and at the same time wind force increased suddenly. On the afternoon the storm became severer, and at 3 p.m the wind velocity was 48.2 meters per second, while the wind veered from east to southeast.
At 3h 35m p.m. the barometer was the lowest which was 742.7 mm.

An extract of the meteorological observations made at Fusan during the passage of the typhoon is as follows :—

Date	Hour	Barometer	Temperature	Wind direct,	Wind vel.	Rainfall	Weather
20th	10 a.m	752.6	26.4	E	15.0 m.p.s.		rain
,,	1.30 p.m.	748.5	24.5	NE	5(wind force)		,,
,,	2	746.6	24.8	NE	35.0	2.9	,,
,,	2.30	745.8	23.1	NE	33.3		,,
,,	3	743.5	23.3	E	48.2		,,
,,	3.20	743.1	23.0	SE	6 (wind force)		,,
,,	3.30	743.0	22.8	SE	6 (,,)		,,
,,	3.35	742.7	22.8	SE	44.3		,,
,,	3.40	742.8	22.8	SE	6 (wind force)		,,
,,	3.45	742.8	22.8	SE	6 (,,)		,,
,,	3.50	742.9	22.8	SE	6 (,,)		,,
,,	3.55	743.1	22.5	SE	6 (,,)		,,
,,	4	743.2	22.5	SE	6 (,,)		,,
,,	4.10	742.9	22.4	SE	6 (,,)		,,
,,	4.20	743.3	22.4	S	6 (,,)		,,
,,	4.30	743.3	22.4	S	34.0		,,
,,	4.40	743.3	22.3	S	6 (wind force)		,,
,,	4.50	743.6	22.3	S	6 (,,)		,,
,,	5	743.6	22.3	S	6 (,,)		,,
,,	5.20	744.3	22.5	S	5 (,,)		,,
,,	5.40	745.6	22.5	S	5 (,,)		,,
,,	6	746.0	22.6	SW	22.7	35.6	,,

The lowest barometric readings and maximum wind velocities observed at the stations on the track of the typhoon are given in the following table :—

Station	Lowest barometer	Time	Maximum wind velocity	Wind direction	Time
Oshima	709.4 mm	19th, 3h 15m p.m.	43.1 m.p.s.	N	19th, 2h 45m p.m.
Kagoshima	751.2	20th, 2 & 4 a.m.	25.7	SSE	20th, 1h 20m a.m
Miyazaki	753.5	19th, 6 p.m.	12.6	SE	19th, 10h p.m.
Kumamoto	750.9	20th, 5 a.m.	13.1	S	20th, 11h a.m.
Nagasaki	749.2	20th, 6 a.m.	35.9	S	20th, 2h p.m.
Saseho	749.4	20th, 9 a.m.	16.7	S	20th, 1 p.m.
Saga	751.1	20th, 8 a.m.	18.7	S	20th, 2 p.m.
Fukuoka	750.7	20th, 10 a.m.	12.4	S	20th, 1 p.m.
Itsugahara	745.3	20th, 2 p.m.	29.8	S	20th, 3 p.m.
Fusan	742.7	20th, 3h 35m p.m.	48.2	E	20th, 3 p.m.
Shimonoseki	751.9	20th, 1 & 2 p.m.	20.2	E	20th, 8h 50m a.m.
Moukpo	748.1	20th, 3h 10m p.m,	15.1	NW	20th, 5 p.m.
Wonsan	748.7	21st, 2 a.m.	21.4	ENE	20th, 11 p.m.

5. *Typhoon of August 27th to Sept. 1st.*

On the 26th the barometer fell slowly and a fresh northerly wind blew in the south western islands. In Naha the weather was threatening with rain, and there was an indication that a cyclone was approaching from far south. On the 27th, as was expected, a typhoon appeared on the southeast of Okinawajima. This typhoon developed somewhere between the Philippines and the Marshall Islands and moved towards the NNW in the beginning. On the 27th it came to the southeast of Riukiu, where it remained stationary for some time. On the morning of the 29th it began to move rapidly, approaching Amami-oshima, whence it moved northeastwards. On the night of the 30th the typhoon reached the sea off Tosa, and on the morning of the 31st, it passed the neighbourhood of Cape Muroto. Then traversing the eastern part of Shikoku, and passing over Tango it entered the Japan Sea. On the afternoon of the 1st of September it passed through the strait of Tsugaru, entering the Pacific Ocean.

The positions of the cyclonic centre, and the directions and velocities of its progressive motion were as follows :—

Date	Hour	Latitude	Longitude	Direction	Velocity
29th	6 a.m.	26° 55′N	131° E	NNE	13.1 km.p.h.
,,	2 p.m.	27° 50′	131° 20′	NE	8.2
,,	10 p.m.	28° 20′	131° 35′	NE	27.7

30th	6 a.m.	30° 05′	132° 40′	NE	11.8
,,	10 p.m.	31° 40′	133° 40′	NNE	15.5
31st	6 a.m.	32° 45′	134° 05′	NNE	22.0
,,	2 p.m.	34° 20′	134° 35′	NNE	30.2
,,	10 p.m.	36° 25′	135° 35′	NE	47.5
1st Sept.	6 a.m.	39° 25′	137° 35′	ENE	48.1
,,	2 p.m.	41° 15′	141° 35′	E	46.5
,,	10 p.m.	41° 40′	146° 00′	E	

From the above table it may be seen that the velocity of the progressive motion of the cyclonic centre was smallest, as it approached Amamioshima, being only 10 km. per hour, but when it entered the Japan Sea the speed increased more than 45 km. per hour.

On the forenoon of the 31st the centre of the typhoon touched Cape Muroto and on the afternoon it came to the eastern part of the Inland Sea. At that time a violent storm prevailed all over Honshu, especially in Kinai, Shikoku, and the Inland Sea district. At 6 a m. on the 31st the barometer fell to 739.8 mm. at Kochi, which was the lowest, and at 8 a.m. the wind velocity was 27.9 m p.s. at Niihama. In the peninsula of Kishiu and in the eastern part of Shikoku there was a heavy rainfall. During 8 hours from 6 a m. of the 31st to 2 p.m. of the same day, the amount of the rainfall was 83 mm. at Wakayama and 55.9 mm. at Tokushima. But as the centre moved northwards the rainfall diminished.

The lowest barometric readings and the maximum wind velocities observed a the stations situated on the track of the centre of the typhoon were as follows :—

Station	Lowest barometer	Time	Max. wind velocity	Wind direction	Time
Oshima	747.6 mm.	30th, 3 & 5 p.m.	13.6 m.p.s.	N	29th, Noon
Kagoshima	745.2	,, 6 p. m.	11.2	NE	,, 10 a.m.
Miyazaki	744.2	31st, 2 a.m.	8.6	NNE	30th, 11 a.m.
Ashizuri	739.9	,, 2 a.m.	53.0	NE	,, Noon
Kochi	739.8	,, 6 a.m.	15.1	N	31st, 6 a.m.
Wakayama	741.6	,, 11 a.m , Noon 1 p. m.	10.8	NNE	30th, 1 p.m.
Tokushima	740.4	,, Noon	13.1	NE	31st, 8 a.m.
Matsuyama	744.2	,, 4 a.m.	13.1	N	,, 9. 20 a.m.
Shisakajima	735.7	,, Noon	23.7	ENE	,, 3. 20 a.m.
Niihama	744.9	,, 6 a.m.	27.9	NE	,; 8 a.m.
Tadotsu	743.7	,, Noon	18.4	NE	,, 7 a.m.
Hiroshima	745.4	,, 1 p.m.	12.2	N	,, 3 p.m.

Okayama	743.5	„ Noon 1 p.m.	9.6	NE E	„ 7 a.m. 10 a.m.
Kobe	742.1	„ 1 & 2 p.m.	21.7	NE	„ 9. 40 a.m.
Osaka	742.8	„ 2 p.m.	16.9	NE	„ 10 a.m.
Yagi	743.0	„ 2 p.m.	10.1	E	„ 9 a.m.
Hamada	747.9	„ 10 a.m.	20.2	NNE	„ 2 p.m.
Sakai	747.4	„ Noon	18.7	NE	„ 10 a.m.
Saigo	748.5	„ 2 p.m.	25.5	E	„ 6 a.m.
Tsu	746.3	„ 3 p.m.	18.3	E	„ 9 a.m.
Gifu	747.9	„ 6 p.m.	15.7	SE	„ 9 p.m.
Nagoya	747.7	„ 6 p.m.	13.3	S	„ 9 p.m.
Hamamatsu	750.7	„ 4 p.m.	16.1	E	„ 10 a.m.
Mera	752.7	Sept. 1st, 4 a.m.	27.6	S	Sept. 1st. 7 a.m.
Choshi	753.2	„ „ 2 p.m.	20.0	SSW	„ 2 p. m.
Takayama	749.0	31st, 10 p.m.	8.2	SE	31st, 10. 10 p.m.
Matsumoto	749.5	Sept. 1st, 1&2 a.m.	10.7	S	Sept. 1st, 6 a.m.
Mayebashi	750.6	„ „ 4 a.m.	17.0	ESE	31 st., 10 p.m.
Hikone	745.5	31st, 4 & 5 p.m.	9.0	SE	31 st., 6 p.m.
Fukui	746.5	31st, 6 & 7 p.m.	6.3	SSW	Sept. 1st., 1 a.m.
Minatsuki	747.4	Sept. 1st, 2 a.m.	21.7	S	„ 3 a.m.
Niigata	748.7	„ „ 2 a.m.	14.4	SW	„ 1 p.m.
Kamo	749.4	„ „ 6 a.m.	23.2	NW	„ 2 p.m.
Akita	750.1	Sept. 1st., 2 p.m.	14.4	W	Sept. 1 st., 4 p.m.
Mito	751.8	„ 2 p.m.	13.8	S	Sept. 1 st, 10 a.m.
Ishinomaki	750.4	„ 2 p.m.	18.5	S	„ „ 10. 20 p.m.
Hakodate	751.8	„ 4 p.m.	17.7	ESE	31 st. Midnight
Suttsu	752.4	„ 6 p.m.	32.9	SSE	„ Midnight

At Ashizuri-saki the barometer began to fall since the forenoon of the 30th and it showed the lowest height 739.9 mm. at 2 a.m. of the 31st. After the forenoon of the 29th a violent wind blew from the east, and at 6 a.m on the 30th its direction changed to the northeast. At midnight the wind velocity was 53 metres per second, at 2 a.m. of the 31st it was 41.6 metre per second. At 6 a.m. the direction of wind was northerly and its force suddenly declined, and at 8 a.m. the wind entirely ceased. On the afternoon the barometer rose and the weather was restored.

An extract of the observations made at the said meteorological station is given below :—

Date	Hour	Barometer	Temperature	Wind direction	Wind velocity	Rain
30th	2 a.m.	749.1 mm.	21.°7 C	NNE	18.4 m.p.s.	4.0

Date	Hour	Barometer	Temperature	Wind direction	Wind velocity	Rain
„	4 a.m.	748.4	21.5	E	16.7	0.3
„	6 a.m.	748.4	24.2	NE	17.2	0.9
„	8 a.m.	748.3	23.8	NE	15.0	0.8
„	10 a.m.	747.0	24.0	N	15.4	0.9
„	Noon	746.0	24.4	NE	18.6	0.0
„	2 p.m.	745.7	25.8	NE	18.7	0.0
„	4 p.m.	744.7	26.6	NE	18.9	0.0
„	6 p.m.	744.1	26.0	NE	14.7	—
„	8 p.m.	743.5	26.0	NE	20.7	0.0
„	10 p.m.	741.8	26.1	NE	20.0	0.0
„	Midnight	740.4	23.5	NE	53.0	5.2
31st	2 a.m.	739.9	22.6	NNE	41.6	4.3
„	4 p.m.	740.2	22.6	NNE	19.2	2.4
„	6 p.m.	740.5	22.9	N	4.4	2.3
„	8 a.m.	741.9	23.6	—	0.2	0.2
„	10 a.m.	744.7	23.6	W	0.6	2.7
„	Noon	744.5	27.1	W	1.8	0.0
„	2 p.m.	744.8	28.4	NW	2.6	—
„	4 p.m.	747.2	28.2	W	1.7	—
„	6 p.m.	749.3	27.4	W	3.4	—

6. Typhoon of Sept. 14th to 18th.

This typhoon appeared on the 14th in the sea south of Ogasawara-jima, whence it moved northwestwards, and on the afternoon of the 15th it came near the islands. The following is an extract of the report on this typhoon given by the Ogasawara meteorological station :—

In Chichijima the sky began to be dark since the evening of the 13th, and at 9 p.m. the weather was threatening with rain and heavy winds. At the dawn of the 14th, the barometer fell rapidly and the sea rose high. On the 15th the barometer fell more and more and on that afternoon the weather was more stormy. The wind direction was easterly since the previous day and its force was most fierce in the evening. There were great injuries to buildings and trees. At 10 p.m. the wind direction changed to the south, while the force declined to some extent and the barometer also rose. Since the early morning of the 16th the weather was restored In Chichijima (Bonins) 9 houses were destroyed beyond restoration, and 10 partially destroyed. Much damage was caused to crops. In Hahashima, losses were greater.

At Okimura, 15 houses were destroyed and 14 partially destroyed. At Kitamura the wind force was so fierce that house articles were carried away into the sea. The scene was so disastrous as had never been seen before, 44 houses were destroyed and 20 partially destroyed.

The centre of the typhoon touched the islands of Ogasawara and then moved northwestwards. On the night of the 16th it came to the south of Shiomisaki in Kishu, and at 2 a.m. on the 17th it appeared on its west. Thence the typhoon moved northwards, and passing over Osaka and Kobe, it entered the Japan Sea. Then it moved towards the ENE and traversed the northern part of Honshu, thus entering the Pacific Ocean again.

The positions of the cyclonic centre, and the directions and velocities of its progressive motion are given in the following table :—

Date	Hour	Latitude	Longitude	Direction	Velocity
16th	2 p.m.	30° 30′N	136° 30′E	NW	27.7km.p.h.
„	10 p.m.	32° 25′	135° 45′	NNW	39.2
17th	6 a.m.	35° 15′	135° 10′	NNE	49.8
„	2 p.m.	38° 40′	136° 40′	NE	35.1
„	10 p.m.	40° 00′	139° 30′	ENE	

When on the early morning of the 17th the centre of the typhoon landed on the west of Shiomisaki and came to the eastern part of the Inland Sea, there prevailed a storm all over Honshu, and near the centre its force was tremendous, the barometer falling below 730 mm. At 6 a.m. on the 17th the wind velocity was 39.7m p. s. at Kioga-saki, and at 4 a.m. it was 35.4 m.p.s. at Shiomisaki. The rainfall was enormous everywhere. In the central and eastern part of Honshu, rivers overflowed their banks, bridges were carried away, and railroads were destroyed, so that communications stopped for a while. Much damage was caused to crops.

The lowest barometric readings and the maximum wind velocities observed at the stations situated near the track of the centre of the typhoon were as follows :—

Station	Lowest barometer	Time	Max. wind vel.	Wind Direction	Time
Ashizuri	737.5 mm.	17th, 2 a.m.	19.1 m.p.s.	N	16th, midnight
Tokushima	731.5	17th, 2h 30ma.m.	17.0	N	17th, 2 a.m.
Wakayama	726.6	17th, 3 a.m.	20.0	SW	17th, 6 a.m.
Shiomisaki	723.8	17th, 2 a.m.	35.4	SW	17th, 4 a.m.
Tadotsu	736.1	17th, 3h 10m a.m.	22.9	N	17th, 3 a.m.
Okayama	735.5	17th, 4 a.m.	13.0	WNW	17th, 6 a.m.
Kobe	728.2	17th, 4 a.m.	28.2	NE	17th, 3h 20m a.m.
Osaka	727.8	17th, 4h 30m a.m.	22.6	NE	17th, 2 a.m.

Station	Lowest barometer	Time	Max. wind vel.	Wind Direction	Time
Kioto	729.3	17th, 5 a.m.	18.2	E	17th, 4 a.m.
Yagi	726.7	17th, 4 a.m.	19.6	S	17th, 6 a.m.
Kiogasaki	730.9	17th, 6 a.m.	39.7	E	17th, 6 a.m.
Miyatsu	732.0	17th, 6 a.m.	17.0	NE	17th, 4 a.m.
Tsu	735.1	17th, 4h 30m a.m	28.2	ESE	17th, 3 a m.
Gifu	739.4	17th, {5h 30m a.m. / 6 a.m.	23.2	ESE	17th, 8 a.m.
Nagoya	739.1	17th, 5 a.m.	24.4	SE	17th, 5h 26m a.m.
Hamamatsu	744.2	17th, 2 a.m.	23.5	E	16th, midnight
Hikone	732.9	17th, 5 a.m.	19.2	E	17th, 5 a.m.
Fukui	734.9	17th, 7 a.m.	16.5	SSE	17th, 10 a.m.
Kanazawa	736.6	17th, 9a.m.	9.8	SSW	17th, 2 p.m.
Minatsuki	736.5	17th, 1 p.m.	35.0	SSE	17th, 3 p.m.
Yamagata	744.2	17th, 5 p.m.	14.8	SE	17th, 11h 20m a.m
Kamo	742.1	17th, 4 p.m.	27.7	SW	18th, 2h 20m a.m.
Ishinomaki	745.9	18th, 2 a.m.	23.5	SE	17th, 2 p.m.
Miyako	745.4	{17th, midnight / 18th, 2 a.m.	18.1	S	17th, 5 p.m.

At Osaka the barometer was 747.6 mm at 4 p.m. on the 16th and the wind was fresh and north-northeasterly. When the centre of the typhoon was approaching, the barometer fell rapidly and at 4h 30m a.m. on the 17th the barometer was 727.8 mm. which was lowest. After 8 p.m of the 16th, the wind became violent and at 2 a.m of the 17th the velocity reached 22.6 m.p.s. The wind continued blowing violently until 11 a.m. An extract of the meteorological observations made at the Osaka meteorological station during the passage of the typhoon is given below :—

Date	Hour	Barometer	Temperature	Wind direction	Wind velocity	Rainfall
16th	7 p. m.	745.9 mm.	22.3	NNE	8.9 m.p.s.	0.7
,,	8 p. m.	744.4	22.7	NNE	10.3	1.5
,,	8 30. p.m.	743.9	22.8	NNE	12.0	—
,,	9 p. m.	742.8	23.6	NNE	12.1	2.6
,,	9 30 p.m.	742.3	23.8	NNE	14.3	—
,,	10. p.m.	741.5	23.8	NE	13.4	1.1
,,	10. 30p. m.	740.8	24.1	NNE	16.2	—
,,	11p.m.	739.9	24.4	NNE	16.8	3.2
,,	11. 30p.m.	739.0	24.4	NE	17.7	—
,,	midnight	738.0	24.5	NNE	18.8	3.3

Date	Hour	Barometer	Temperature	Wind direction	Wind velocity	Rainfall
17th	0. 30 a.m.	737.1	24.6	NE	18.9	—
„	1 a. m.	736.5	25 1	NE	17.8	2.1
„	1. 30 a.m.	735.0	25.3	ENE	19.1	—
„	2 a. m.	732.9	25.2	NE	22.6	1.9
„	2. 30 a. m.	731.9	24.8	NE	21.8	—
„	3 a. m.	730.5	24.7	NE	20.9	3.2
„	3. 30 a.m.	728.6	24.8	NE	21.9	—
„	4 a. m.	727.9	24.8	NE	19.7	1.3
„	4. 30 a. m.	727 8	24.3	ENE	13.8	—
„	5 a. m.	729 1	24.2	SSE	9.6	6.9
„	6 a. m.	734.1	24.4	SW	14.1	1.1
„	7 a. m.	739 2	23.7	SW	16.1	4.0
„	8 a. m.	741.5	23.5	SW	12.3	0.2
„	9 a. m.	743.3	23.9	SW	10.9	0.1
„	10 a. m.	744.4	24.3	SW	10.2	0.0
„	11 a. m.	745.2	24.6	WSW	11.1	0.0

According to the report of the Yokohama meteorological station, sea waves at Odawara were very high since the 14th of September, and the conditions of the sea were about the same on the 15th. After 10 p.m. a heavy easterly wind blew occasionally, and on the 16th the force of waves was violent. According to the eye observation of fishermen, waves came over the embankments at 8 p.m. and buried many houses. At the noon of the 17th the condition of the sea was restored. When the waves were violent, the wind was heavy and easterly. Since the dawn of the 17th the wind became southerly and its force diminished. At that time sea water came up to the floors of 12 houses in Odawara and to those of 6 houses in Kozu. Roads were destroyed in 4 places in Kozu, and in 1 place in Hayakawa-mura. Stone-walls were demolished in 2 places in Yoshihama-mura. A small boat was destroyed in Mazuru-mura. In Kozu-mura, 4 bridges, and in Maiba-mura and Hayakawa-mura each 1 bridge, were broken down. The land which was covered by water extended over 17 cho.

7. *Typhoon of Oct. 3rd to 6th.*

Early on the morning of the 4th this typhoon appeared on the south of Ogasawarajima (Bonins). According to the report of the observer at the Ogasawara station, it was cloudy all day on the 3rd, and towards the evening the sky was red all over. Since 7 p.m. the rain began to fall and continued through all night. Since the dawn

of the 4th the rainfall became heavier and the force of the wind increased slowly. At 10 a.m. the barometer fell to 747.8 mm. and at 2 p.m. to 742.2 mm. The force of the storm was fierce. The barometer fell more and more. Then suddenly a violent rain storm began, causing the overflow of rivers. At 7h 10m p.m. the barometer read 718.4 mm. which was the lowest, when the force of the wind declined suddenly. At 9h 50m a.m. the direction backed to the northeast and the force increased again and became violent. At 1h 50m a.m. on the 5th the wind became westerly and its force declined gradually. Finally the weather was restored.

At Chichi-shima the barometer was lowest at 7h 10m p.m. on the 4th, and the force of the wind declined suddenly. At that time the centre of the typhoon was passing the neighbourhood of the island with its direction to the north west. On the afternoon of the 5th it reached the latitude 30° N, whence it changed its course to the northeast. On that night the typhoon passed over the sea off Boso, and on the afternoon of the 6th it went away towards the Pacific, by passing over the east of Hokkaido.

The positions of the centre of the typhoon, and the directions and velocities of its progressive motion are given in the following table :—

Date	Hour	Latitude	Longitude	Direction	Velocity
4th	8 p.m.	27° 15′N	142° 10′E	NW	48.9 km.p.h.
,,	10 p.m.	27° 55′	141° 35′	NW	35.1
5th	6 a.m.	30°	140° 05′	NW	47.3
,,	2 p.m.	33° 20′	140°	N	39.2
,,	10 p.m.	35° 40′	141° 55′	NE	71.4
6th	6 a.m.	40° 02′	145° 50′	NE	71.0
,,	2 a.m.	44° 05′	150° 05′	NE	

After the centre of the typhoon changed its course to the northeast, the velocity of its progressive motion increased suddenly, as shown in the above table.

At Choshi, the barometer fell rapidly, since 2 a.m. of the 5th, at a rate of 1 mm. per hour. At 8 and 9 p.m., the barometer fell to the lowest, 741,5 mm A violent wind continued blowing from the early morning to the midnight, and at 8 p.m. the wind velocity reached the maximum, 29.2 m.p.s.

An extract of the meteorological observations made at the Choshi station during the passage of the typhoon is given below :—

Date	Hour	Barometer	Temperature	Wind direct.	Wind vel.	Weather
5th	2 a.m.	756.1 mm.	20.°4C	NNW	5.9	cloudy
,,	4 a.m.	755.3	20.1	NNE	9.2	,,
,,	6 a.m.	754.1	19.9	NNE	15.3	,,
,,	8 a.m.	753.0	20.2	NNE	16.5	,,

Date	Hour	Barometer	Temperature	Wind direct.	Wind vel.	Weather
,,	10 a.m.	752.0	20.2	NNE	15.3	rain
,,	11 a.m.	750.9	20.2	NNE	15.9	,,
,,	Noon	750.1	20.0	NNE	14.4	,,
,,	1 p.m.	749.0	19.6	NNE	16.3	,,
,,	2 p.m.	747.9	19.6	NNE	17.1	,,
,,	3 p.m.	746 4	19.2	NNE	22.0	,,
,,	4 p.m.	745.9	19.0	NNE	24.4	,,
,,	5 p.m.	744.6	18.6	NNE	26.8	cloudy
,,	5.30 p.m.	743.8	18.8	NNE	28.4	rain
,,	6 p.m.	743.6	18.8	NNE	28.7	cloudy
,,	6.30 p.m.	742.8	19.0	NNE	27.4	rain
,,	7 p.m.	742.3	18.8	NNE	28.8	,,
,,	7. 30 p.m.	741.8	18.8	NNE	28.9	,,
,,	8 p.m.	741.5	19.0	NNE	29.2	,,
,,	8.30 p.m.	741.5	19.0	N	27.2	cloudy
,,	9 p.m.	741 5	19.0	NNW	24.7	rain
,,	10 p.m.	742.0	18.2	NW	25.2	,,
,,	11 p.m.	742.9	17.8	NW	15.9	cloudy
,,	midnight	744.6	19.5	NW	15.2	,,

When this typhoon was passing, a violent storm was caused all over the peninsula of Boso, the northeastern part of Honshu, and Hokkaido, but when the centre moved northwards, the intensity of the storm diminished remarkably, so that the losses outside Ogasawarajima were fortunately not great.

The lowest barometric readings and the maximum wind velocities observed at the stations situated near the path of the typhoon are as follows :—

Station	Lowest barometer	Time	Maximum wind vel.	Direction	Time
Nagatsuro	745.9 mm.	5th, 4 p.m.	14.5 m.p.s.	NE	5th, 11 a.m.
Numazu	745.4	5th, 4 p.m.	12.3	NE	5th, {10 a.m. 2 p.m.
Yokosuka	745.3	5th, 7 p.m.	12.2	NNW	5th, 6 p.m.
Yokohama	746.0	5th, 8 p.m.	18.7	NNW	5th, 5 p.m.
Tokio	745.8	5th, 9 p.m.	12.8	NNW	5th, 6 p.m.
Mera	742.0	5th, 6 p.m.	34.3	N	5th, 7 p.m.
Choshi	741.5	5th, {8 p.m. 9 p.m.	29.2	NNE	5th, 8 p.m.
Utsunomiya	745.5	5th, midnight	11.4	N	5th,5 p.m.
Fukushima	746.0	6th, 2 a.m.	10.8	NW	6th, 6 a.m.

Station	Lowest barometer	Time	Maximum wind vel.	Direction	Time
Mito	745.1	5th, 10 p.m.	16.8	N	6th, 10 a.m.
Ishinomaki	744.6	6th, 3 a.m.	14.6	NNE	5th. 6 40 p.m.
Miyako	745.4	6th, 4 a.m.	7.3	NE	5th, 2 p.m.

8. Continental depression of November 4th to 7th.

This depression came from North China. On the night of the 4th it appeared in the southern part of Manchuria, whence it moved southeastwards. On the morning of the 5th the depression came to the northern part of Korea. The depression was not intense. At 6a.m. on the same day, in Wonsan, the barometer was 762 mm. and the weather was clear, a moderate south westerly wind blowing. But on the afternoon of the 5th the centre of the depression became considerably intense, at the central part of the Japan Sea, and on the night of that day it approached the north-westen coast of Honshu. At that time the barometer fell rapidly in the northern part of Honshu, and the weather was stormy all over Kiushu, the western part of Honshu, and the coast of the Japan Sea. On the early morning of the 6th the centre traversed the northern part of Honshu, and when it entered the Pasific its course changed to the northeast. On the night of that day the depression passed over the sea south east of Hokkaido, and on the morning of the 7th passed away towards the Pacific.

The positions of the cyclonic centre, and the directions and velocities of its progressive motion were as follows :—

Date	Hour	Latitude	Longitude	Direction	Velocity
4th	10 p.m.	42° 10′N	124° 15′E	SE	38.4 km.p.h.
5th	6 a.m.	41° 10′	127° 45′	ESE	88.1
,,	2 p.m.	39° 50′	136° 05′	ESE	20.4
,,	10 p.m.	39° 25′	138°	E	46.5
6th	6 a.m.	39°	142° 30′	ENE	25.3
,,	2 p.m.	39° 50′	144° 30′	NE	44.9
,,	10 p.m.	42° 10′	147° 50′	NE	44.1
7th	6 a.m.	44° 55′	150°	NNE	

When the depression was traversing the northern part of Honshu on the early morning of the 6th, high wind and heavy rainfall occurred all over Honshu and a snow storm in its central part. The depth of snow-fall was more than 1 foot at Takayama. On the northern part of Honshu there was a thunder storm. On the7th a violent storm occurred in Hokkaido. At Shana, the barometer fell to 728.2 mm at 6 a.m.

of that day. It was the lowest reading observed in this country during the passage of the storm. At Abashiri the wind velocity was 37.6 m.p.s. at 4 a.m. The damage caused by wind and rain was not small. Telegraphic communication was cut off for a time.

The lowest barometric readings and the maximum wind velocities observed at the stations situated near the path of the centre of the depression are given in the following table :—

Station	Lowest barometer	Time	Max. wind vel.	Direction	Time
Kofu	746.0 mm	6th, 7 a.m.	17.1 m.p.s.	NW	6th, 9 a.m.
Kanazawa	748.6	6th, 4 a.m.	11.7	W	7th, 6 a.m.
Minatsuki	747.7	6th, 6 a.m.	20.5	W	5th, 6 p.m.
Fushiki	748.4	6th, 3 a.m.	20.8	NNW	6th, 5 a.m.
Niigata	746.1	6th, 4 a.m.	21.7	NW	6th, 6 a.m.
Yamagata	744.3	6th, 6 a.m.	7.2	SSW	6th, 6 a.m.
Kamo	743.0	6th, 5 a.m.	47.5	NNW N	6th, 6 a.m. 7 a.m.
Akita	745.3	6th, 4&6 a.m.	24.2	WNW	6th, 10 p.m.
Ishinomaki	744.0	6th, 6&7 a.m.	22.9	NW	6th, 10,20 a m.
Miyako	743.3	6th, Noon	11.7	W	6th, 6 p.m.
Aomori	745.1	6th, 2 p m.	9.5	W	6th, 5 p.m.
Hakodate	744.0	6th, 2 p.m.	13.5	NW	6th, 7 a.m.
Suttsu	744 1	6th, 8 p.m.	27.1	NNW	7th, 8 a.m.
Sapporo	743.8	6th, 5&6 p.m.	13.6	N	7th, 9 a.m.
Kamikawa	744.2	6th, 10 p.m.	9.4	NNW	7th, 6 a.m.
Abashiri	738.7	7th, 1 & 3 a.m.	37.6	N	7th, 4 a.m.
Kushiro	735.9	7th, 1 & 2 a.m.	15.0	NNE	7th, 4 a.m.
Nemuro	730.4	7th, 2 a.m.	34.3	NNE	6th, 11 p.m.
Shana	728.2	7th, 6 a.m.	34.3	WNW	7th, 3 p.m.

According to the report of the Kushiro meteorological station the barometer began to fall since 2 a.m. of the 6th, and there was an indication of an approaching storm, the entire sky being covered with thick clouds. At 6 a.m. the air temperature rose considerably and the weather was threatening with a rainfall. At 10 a.m. the wind became fresh and its direction changed to the east, the temperature again falling. Then sleet, snow, and rain fell together or alternately, and the barometer fell rapidly. At 2 p.m. the wind direction backed to the NNE and the force also increased. At 4 a.m. on the 7th the wind velocity which was the maximum was 15 m.p.s. The snowfall ceased at 4h 40m p.m. At 4 p.m. the force of the wind began to decline, and towards the evening the weather was restored, the thick clouds disappearing gradually.

At Nemuro the barometer began to fall rapidly from 8 a.m. on the 6th. The rate of falling then was more than 1 mm. per hour At 2 a.m. on the 7th the barometer reached the lowest, i.e. 730.4 mm. After 7 a.m, of the 6th the force of the wind became violent, i e. 34.3 m.p.s. at 11 p.m., and 33.3 m.p.s at the midnight. A violent wind of over 20 m.p.s. continued blowing for 26 hours from 4 p.m. of the 6th till 5 p.m. of the 7th. S. S. Hokkaimaru which was staying in Nemuro harbor had its anchor cut off by fierce waves, and finally ran aground at 8h 40m a.m. on the 7th.

An extract of the meteorological observations made at the Nemuro station during the passage of the depression is given below : —

Date	Hour	Barometer	Wind direct.	Wind vel.	Rain fall	Weather
6th	8 a.m.	749.3 mm.	E	12.3	0.0	slight rain
,,	9 ,,	748.1	ENE	15.2	0.0	,,
,,	10 ,,	747.8	E	17.2	2.1	rain
,,	11 ,,	745.7	ENE	16.2	5.4	,,
,,	Noon	744.8	E	18.9	3.5	,,
,,	1 p.m.	743.8	E	20 3	1.0	,,
,,	2 ,,	743.1	ENE	19.2	0.3	slight rain
,,	3 ,,	742.1	ENE	18.2	4.6	rain
,,	4 ,,	741.0	ENE	20.6	3.0	,,
,,	5 ,,	740.0	NNE	21.0	2.8	,,
,,	6 ,,	738.2	NNE	23.1	3.7	,,
,,	7 ,,	737.2	ENE	19.3	3.4	,,
,,	8 ,,	736.4	NE	20.7	4.2	,,
,,	9 ,,	734.2	NNE	23.2	3.7	,,
,,	10 ,,	733.2	NNE	31.1	1.0	,,
,,	11 ,,	731.8	NNE	34.3	6.3	,,
,,	midnight	731.3	NNE	33.3	7.9	,,
7th	1 a.m.	730.5	N	29.1	6.8	,,
,,	2 ,,	730.4	NNW	25.7	6.1	,,
,,	3 ,,	730.7	NNW	24.9	5.0	,,
,,	4 ,,	731.8	NNW	25.0	3.4	,,
,,	5 ,,	733.5	NNW	29.1	1.7	,,
,,	6 ,,	734.9	NNW	26.5	1.0	,,
,,	7 ,,	736.4	NNW	28.3	1.8	,,
,,	8 ,,	737.0	NNW	27.4	1.5	,,
,,	9 ,,	739.4	WNW	27.4	0.7	,,
,,	10 ,,	740.4	WNW	25.1	0.7	,,

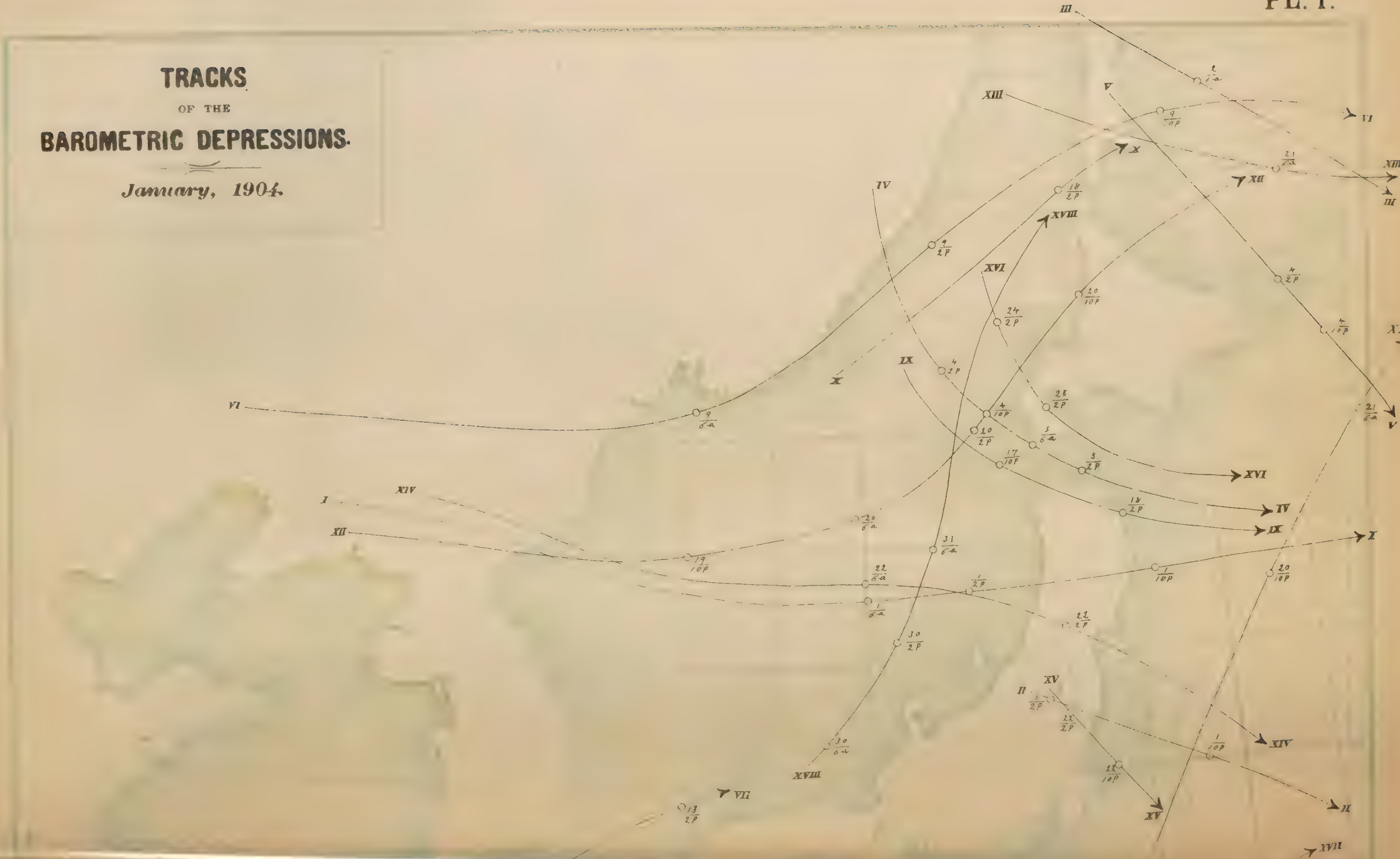
Date	Hour	Barometer	Wind direct.	Wind vel.	Rain fall	Weather
7th	11 a.m.	741.5 mm.	WNW	24.6	0.4	rain
,,	Noon	742.9	NW	26.4	0.6	,,
,,	1 p.m.	744.6	WNW	25.7	0.6	snow
,,	2 ,,	746.5	NW	23.5	1.5	rain
,,	3 ,,	747.9	NW	24.3	0.4	slight rain

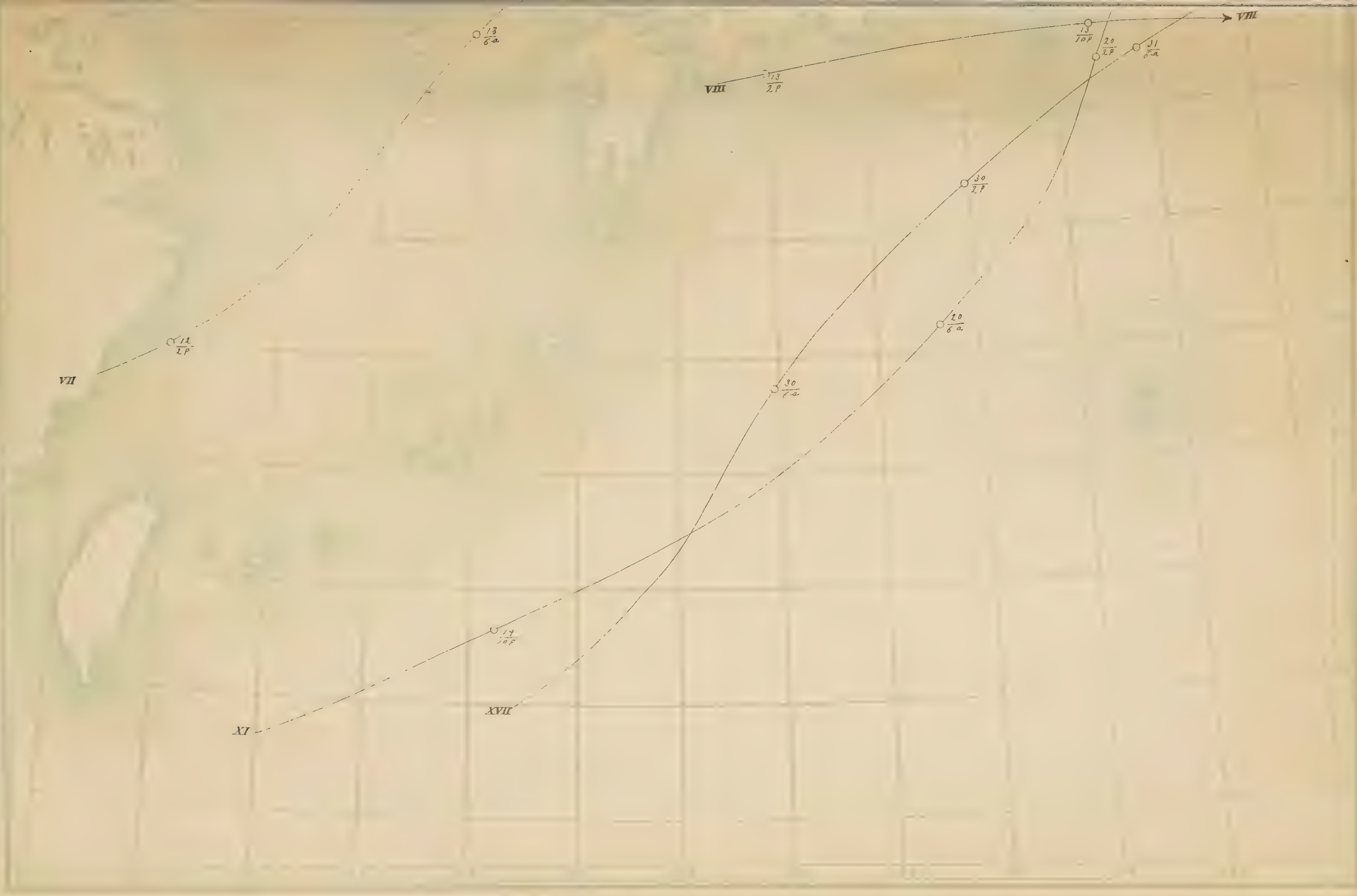
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PL. I.

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.

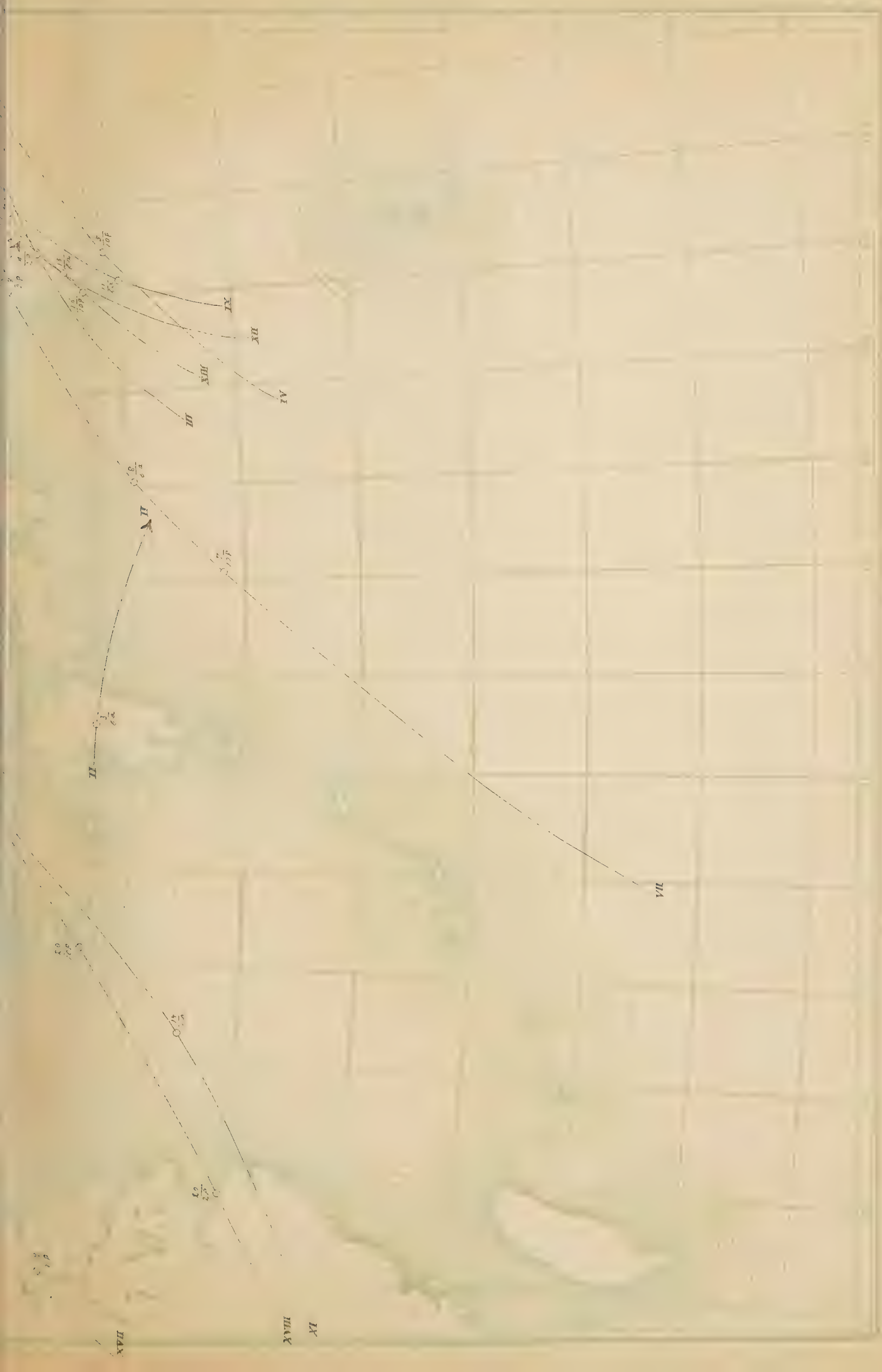
January, 1904.




VIII
13 / 10 p
20 / 2 p
31 / 6 a
13 / 2 p
VIII
30 / 2 p
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13 / 6 a
12 / 2 p
VII
17 / 10 p
XVII
XI

PL. II.


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
February, 1904.
V
XX
XIX
VIII
XIV
XXI
VI
X
XVI
XVII
XVIII
XV
XI
XII
VII



PL. III.

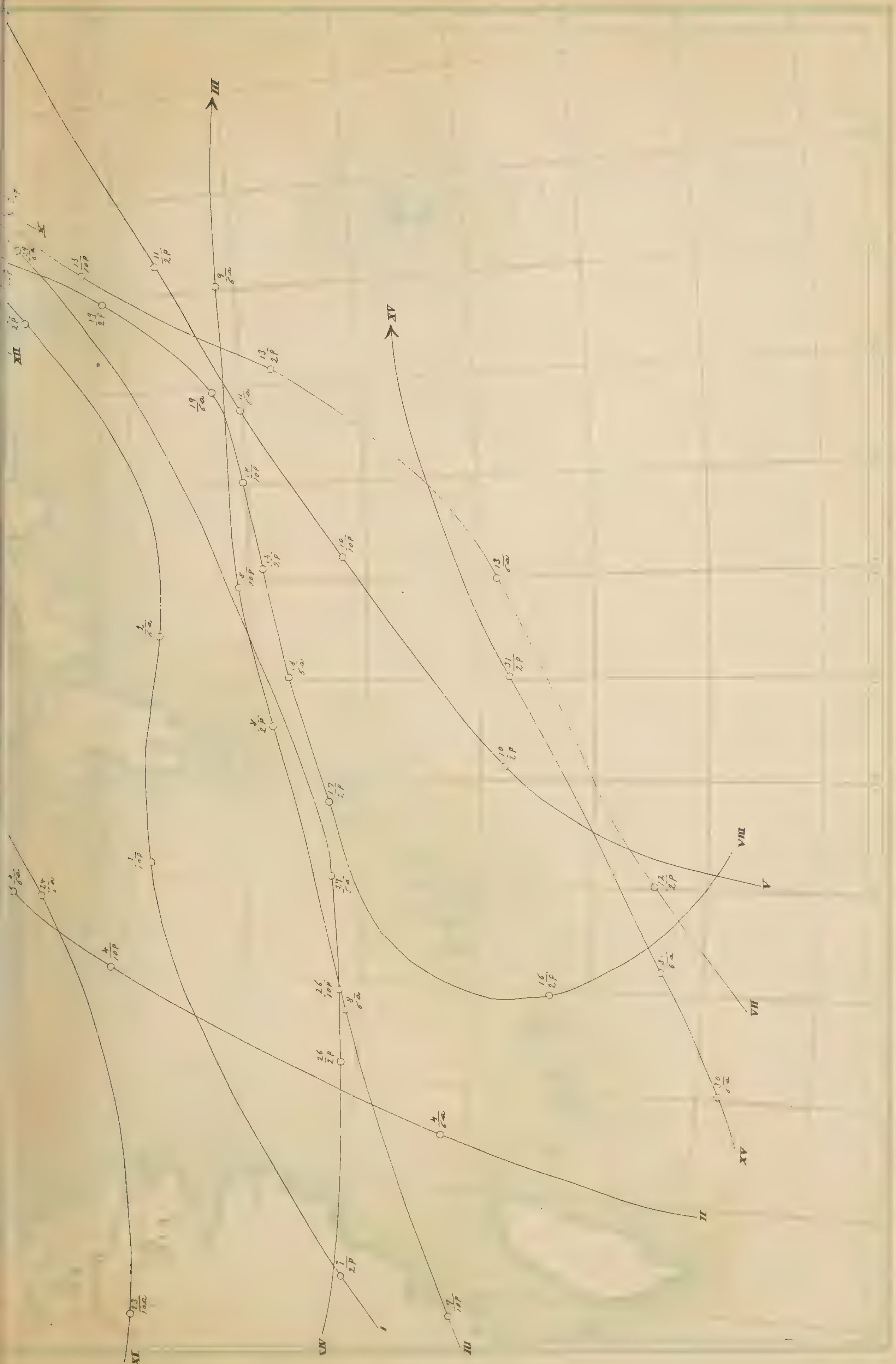


TRACKS

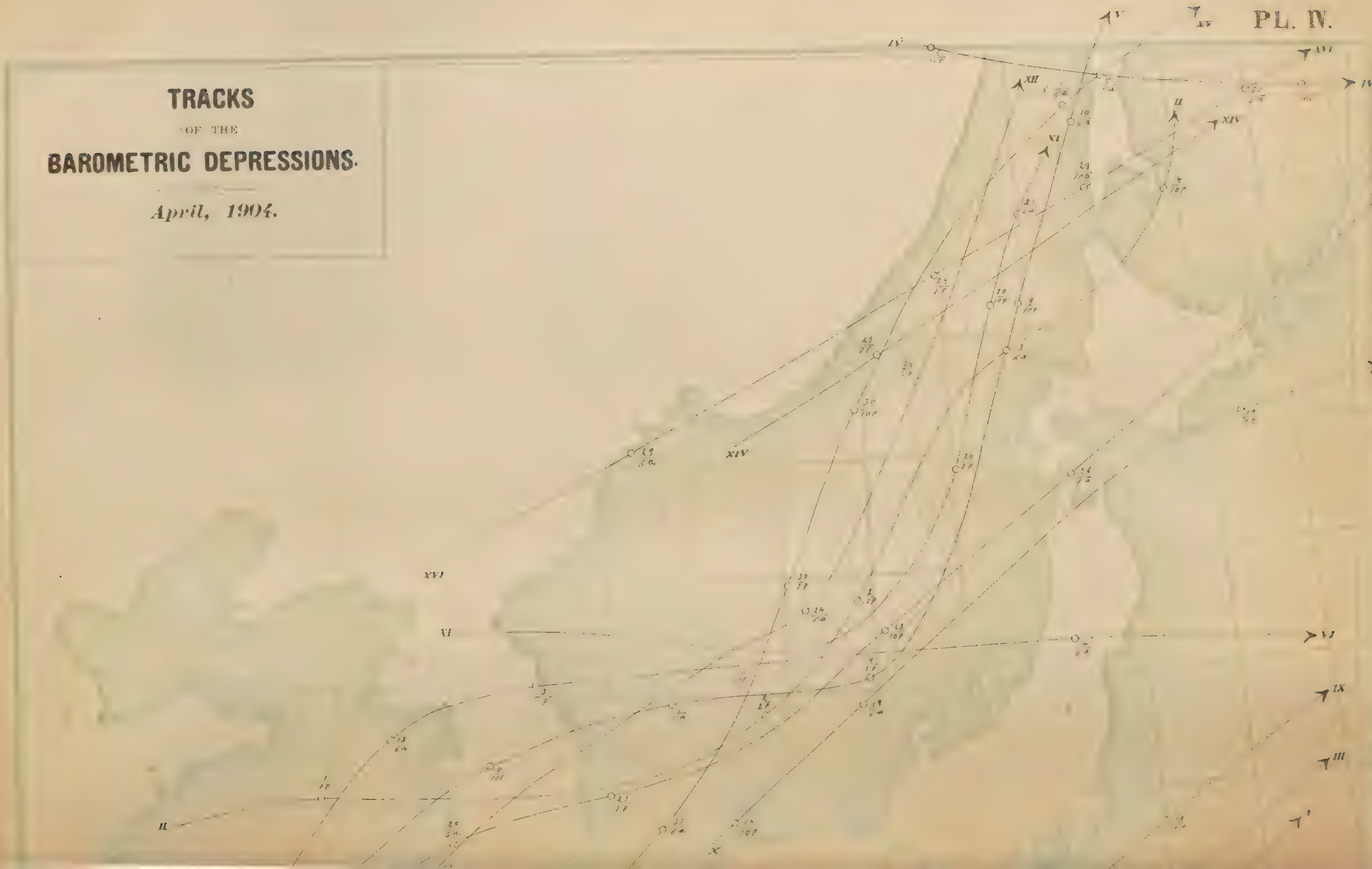
OF THE

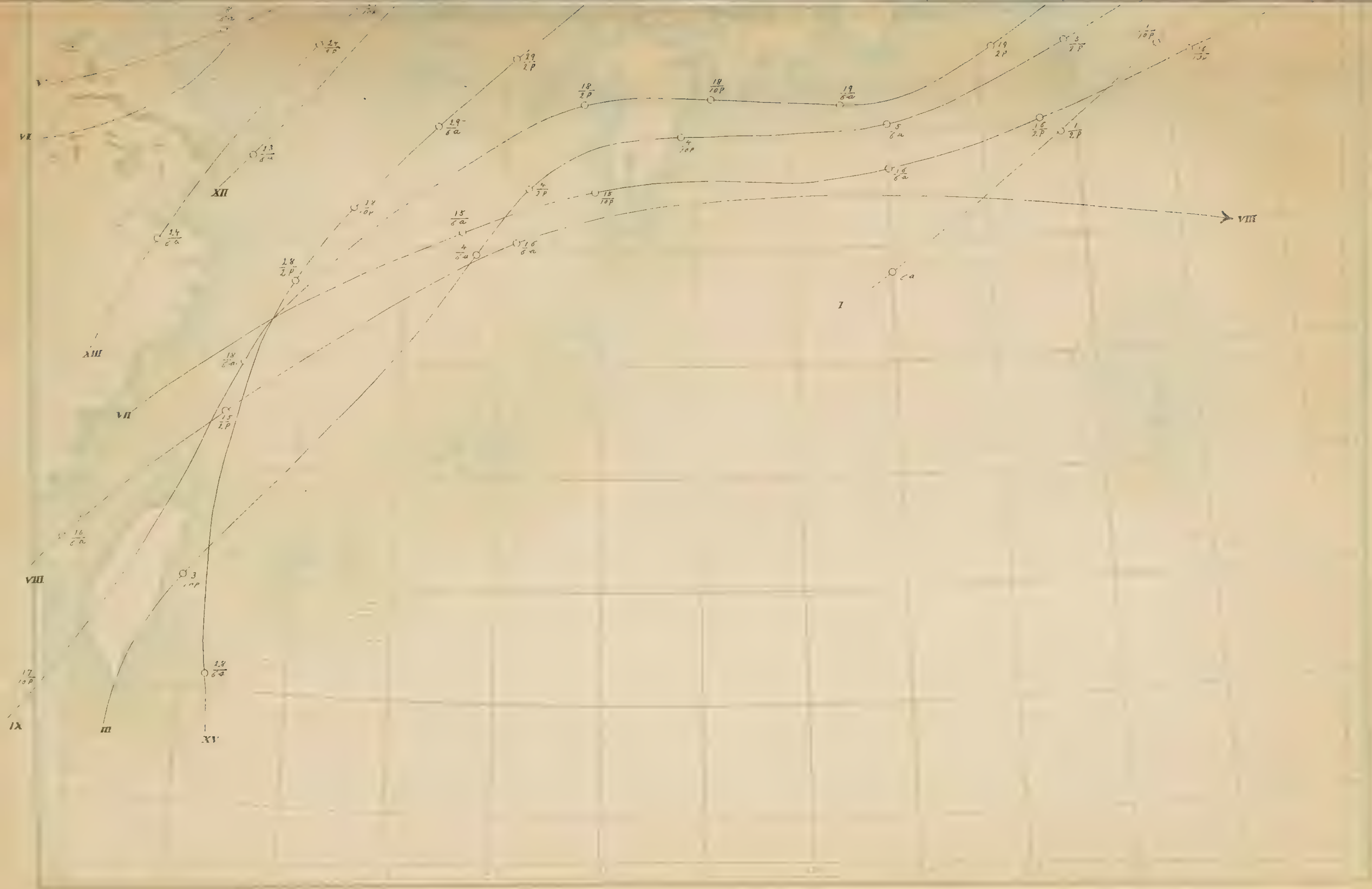
BAROMETRIC DEPRESSIONS.

March, 1904.


I
II
III
V
VII
VIII
XI
XII
XV

PL. IV.

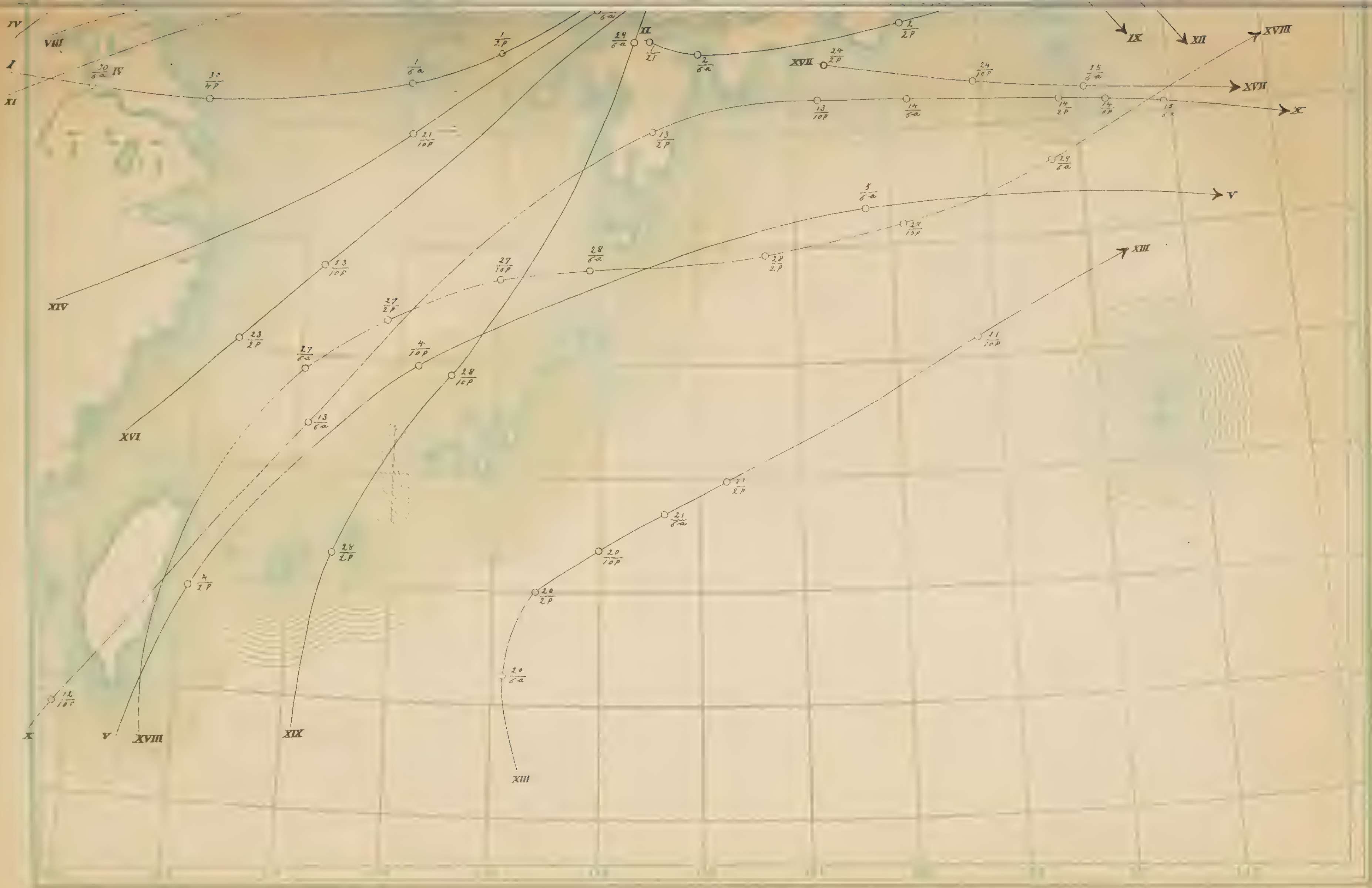

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
April, 1904.
IV
XII
VI
XIV
XVI
VI
II
XV
XIII
X
IX
III
I



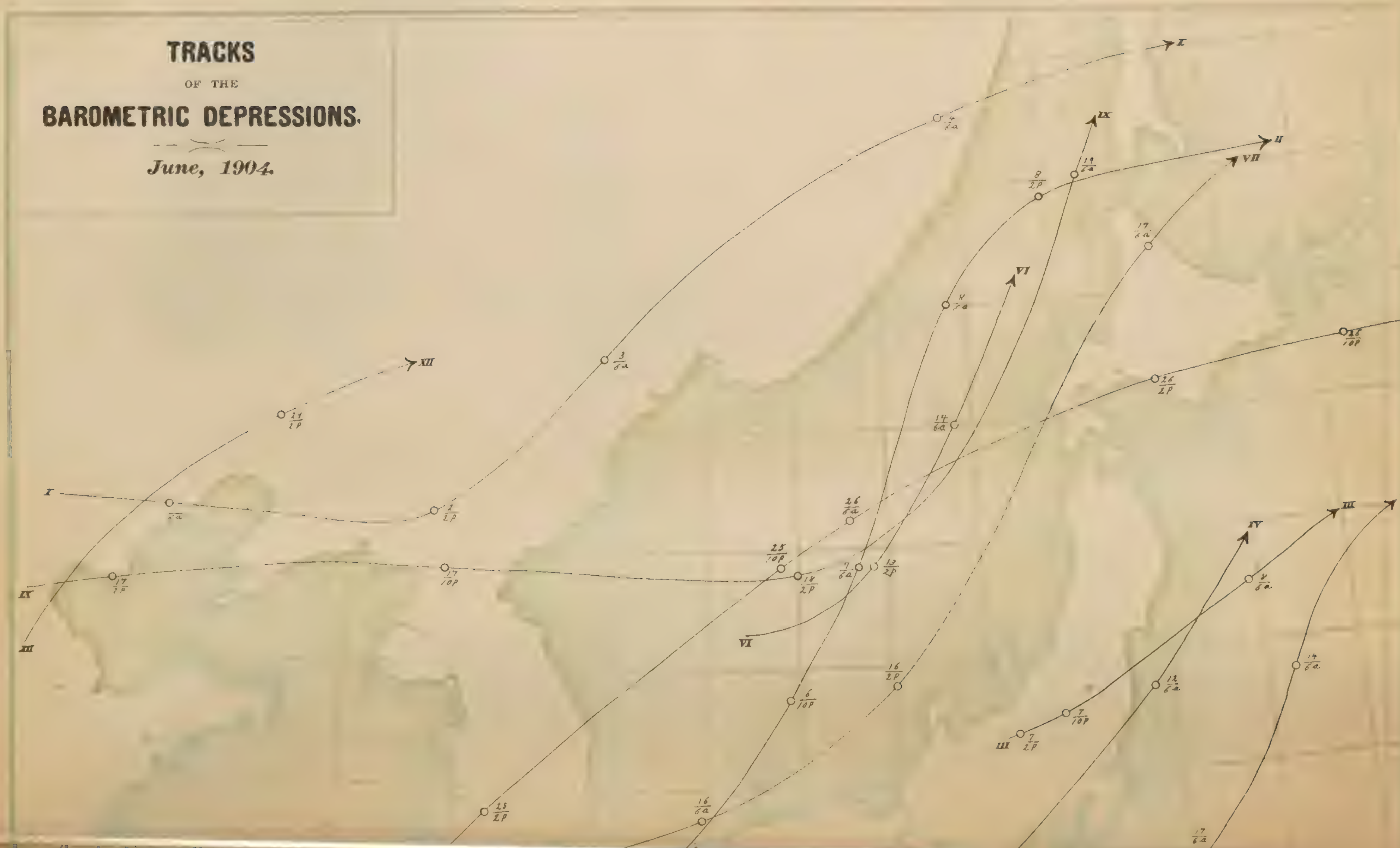
V
VI
XII
XIII
VII
VIII
IX
III
XV
I
VIII

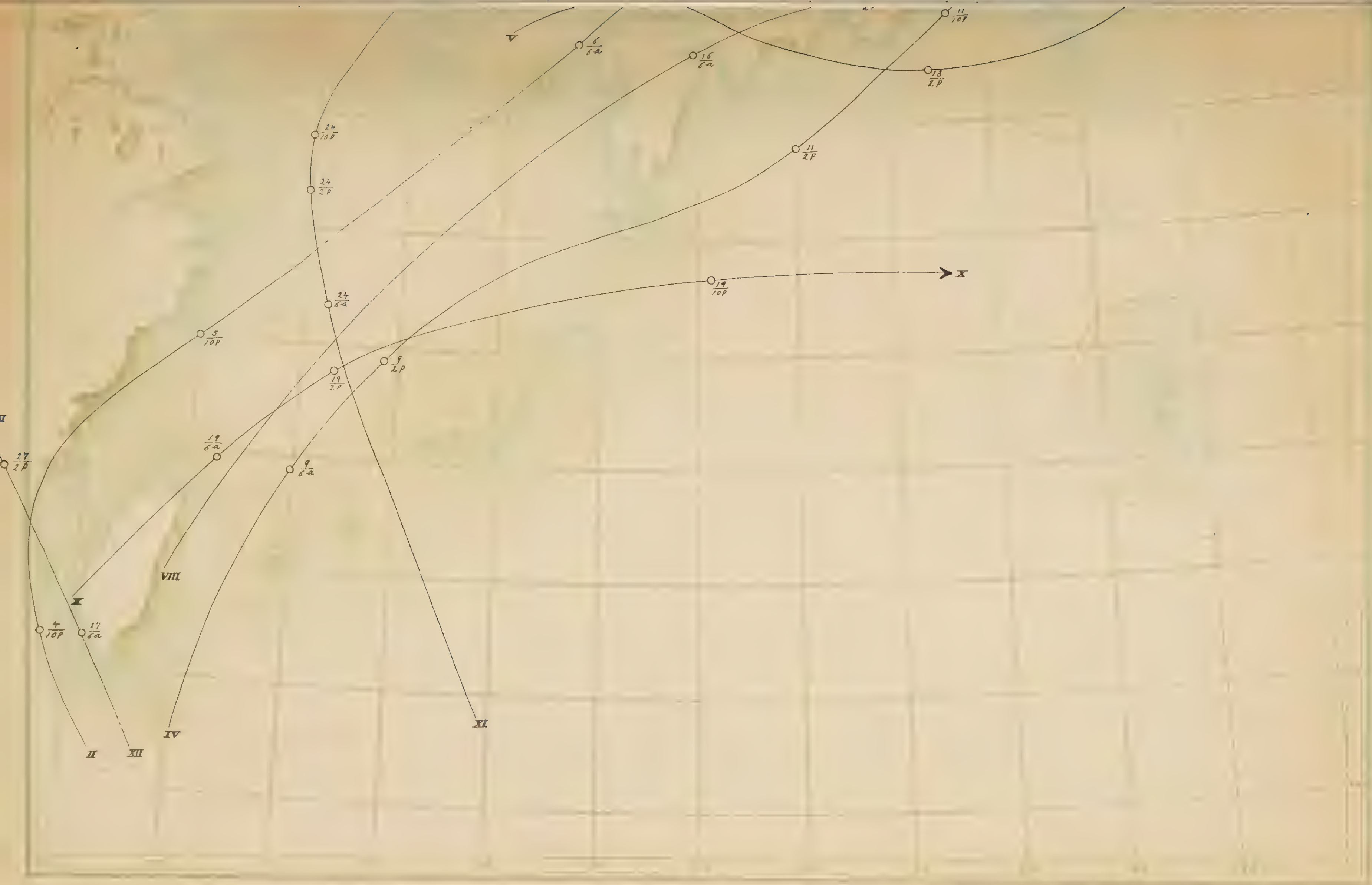
PL. V.


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
May, 1904.
I
II
III
IV
VI
VII
VIII
IX
XI
XII
XIV
XV
XVI
XIX



IV
VIII
I
IV
XI
II
XVII
IX
XII
XVIII
XVII
X
V
XIII
XIV
XVI
X
V
XVIII
XIX
XIII


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
June, 1904.



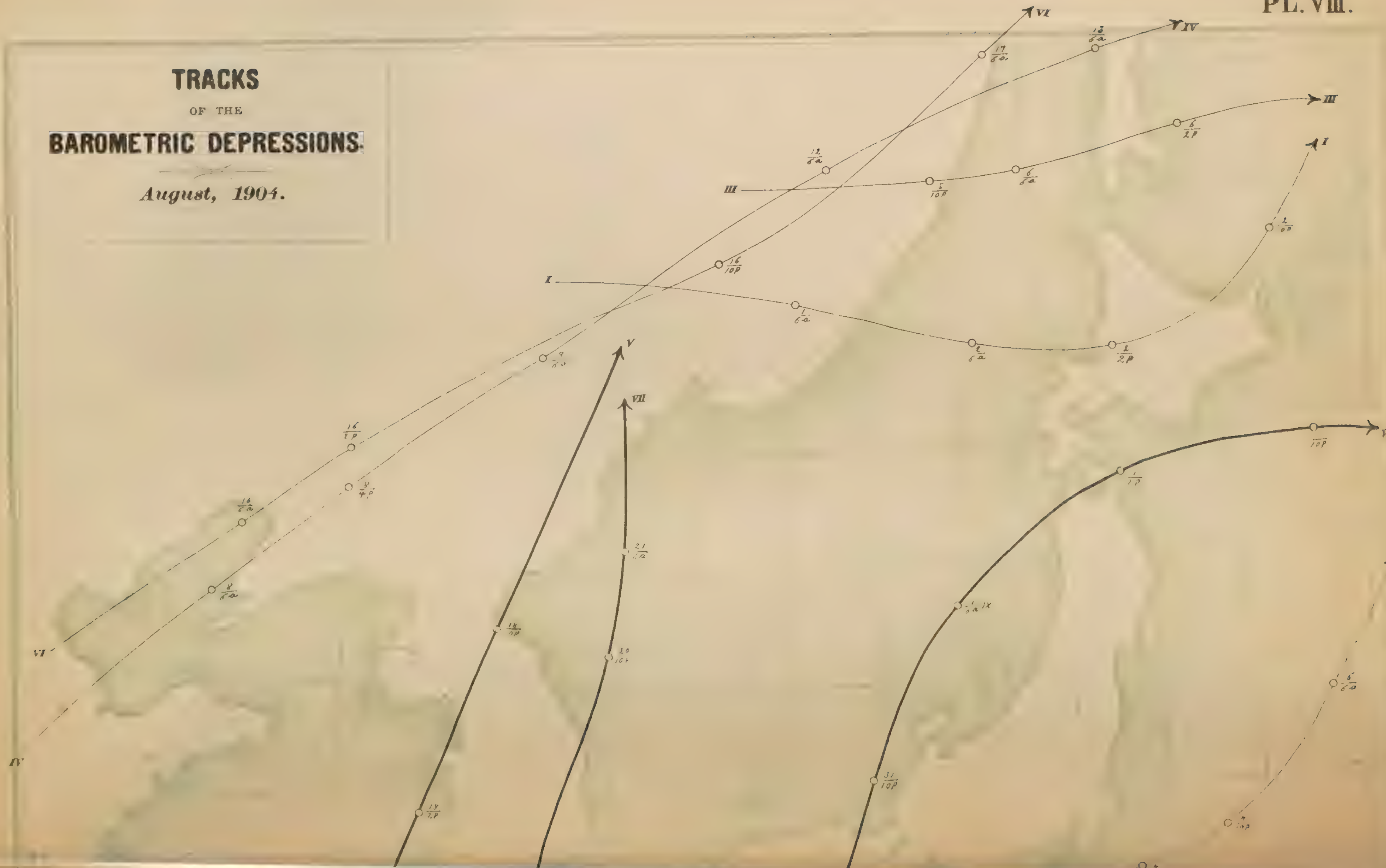
V
6/6a
16/6a
11/10p
13/2p
24/10p
24/2p
11/2p
X
19/10p
24/6a
5/10p
9/2p
19/2p
19/6a
27/2p
9/6a
VIII
X
4/10p
17/6a
XI
IV
II
XII

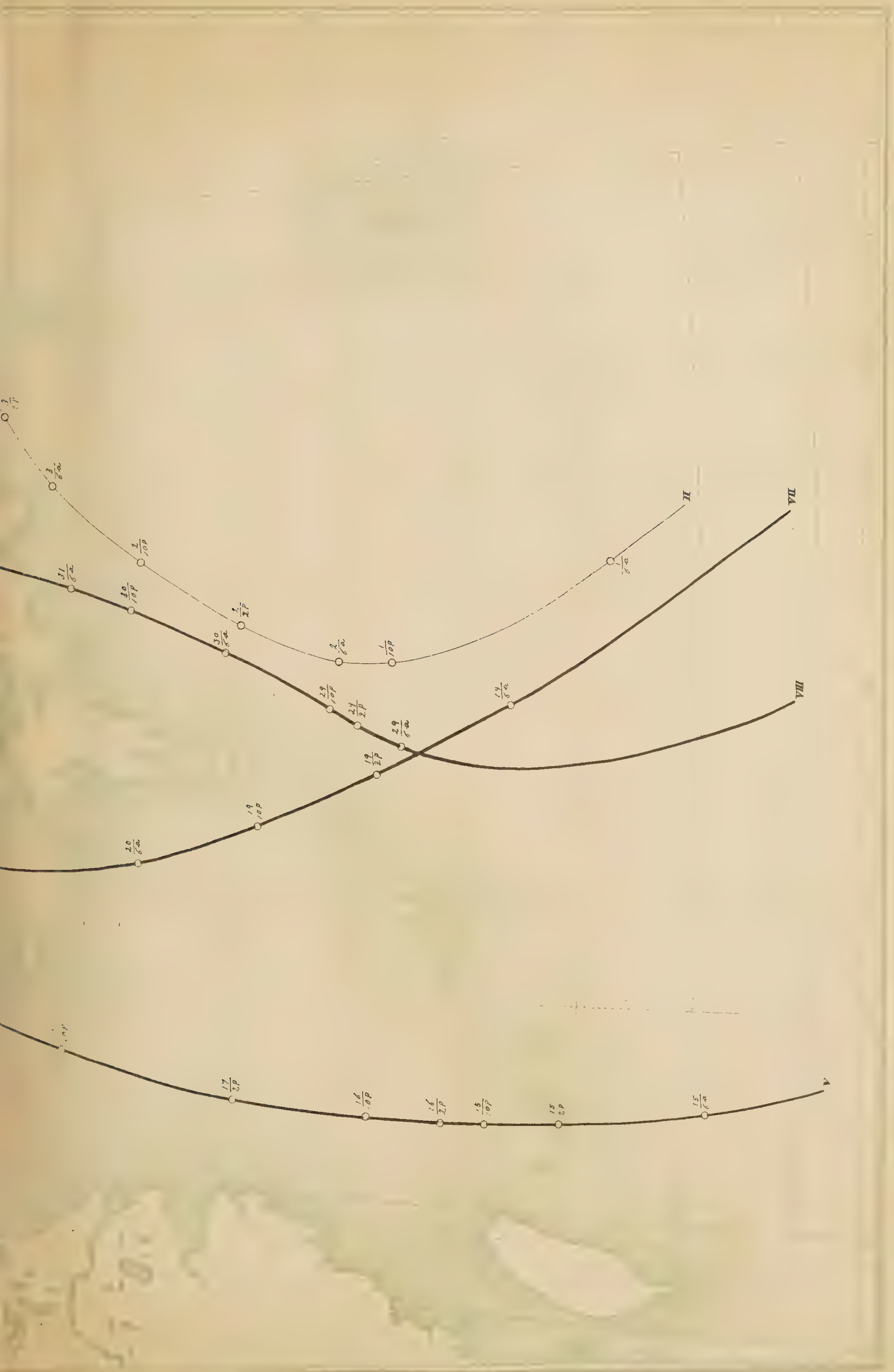
PL. VII.

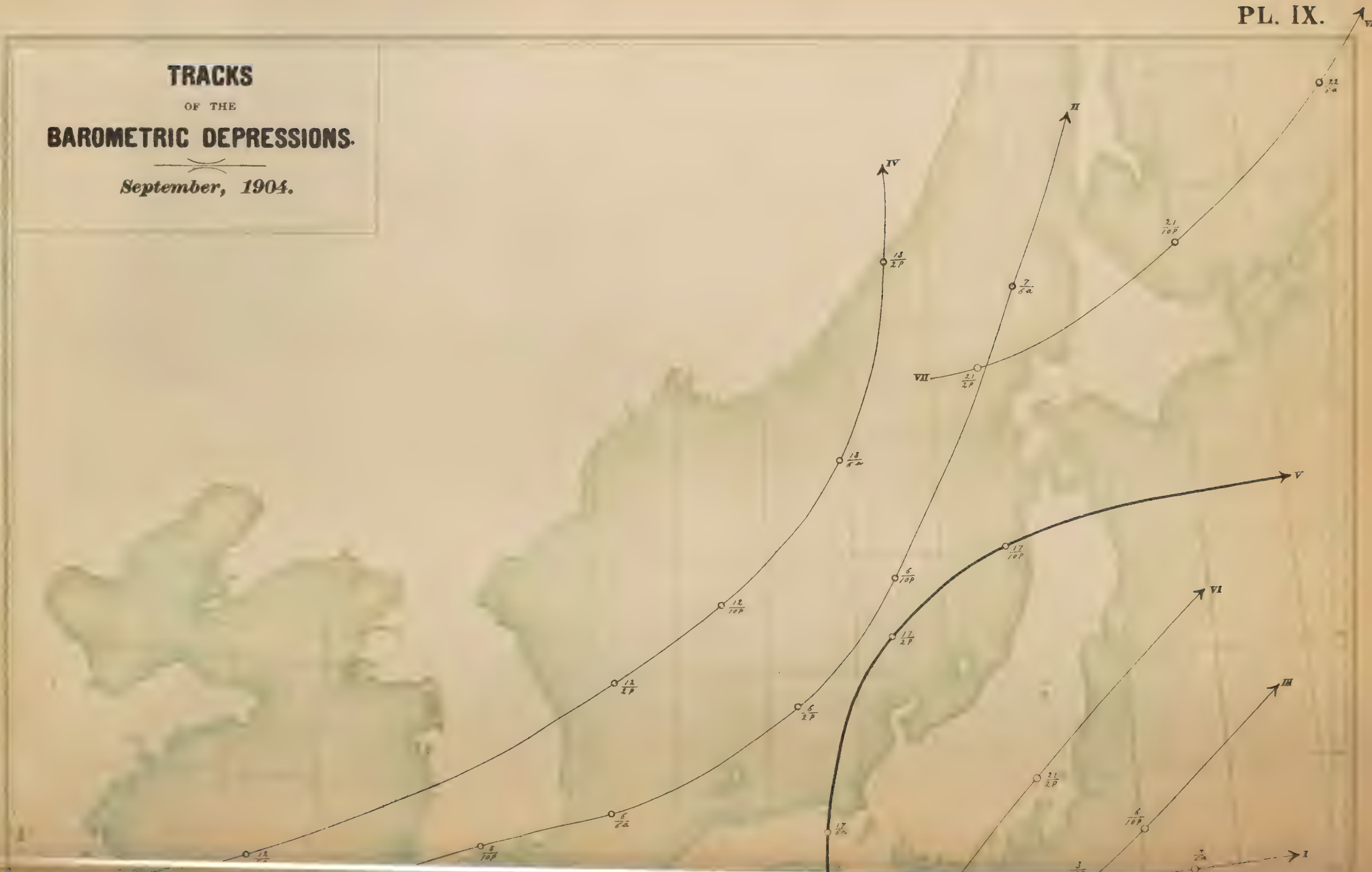



IV
III
VI
XV
XIII
V
XII
II
X

PL. VIII.

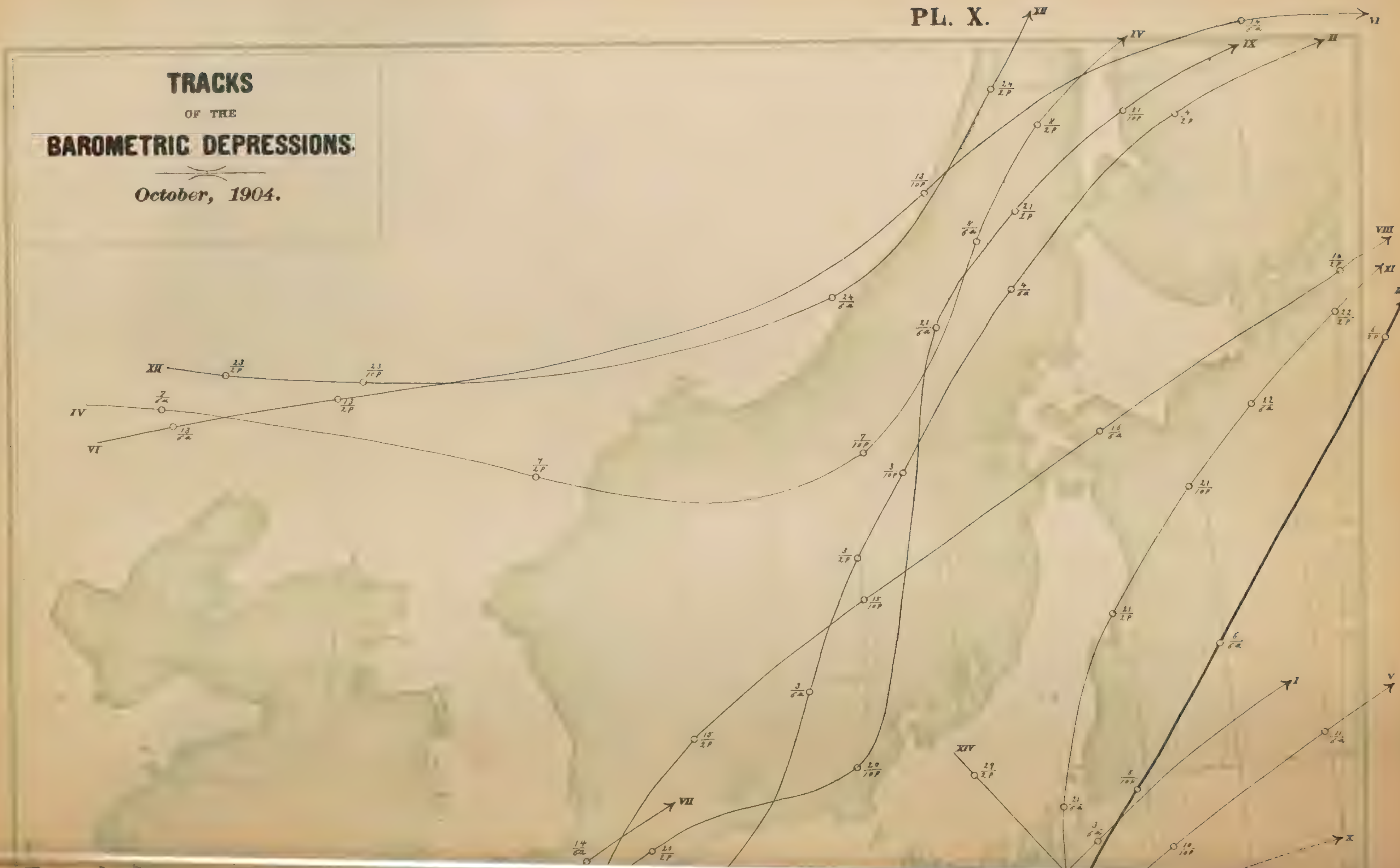

TRACKS
OF THE
BAROMETRIC DEPRESSIONS
August, 1904.
I
II
III
IV
V
VI
VII
VIII
IX

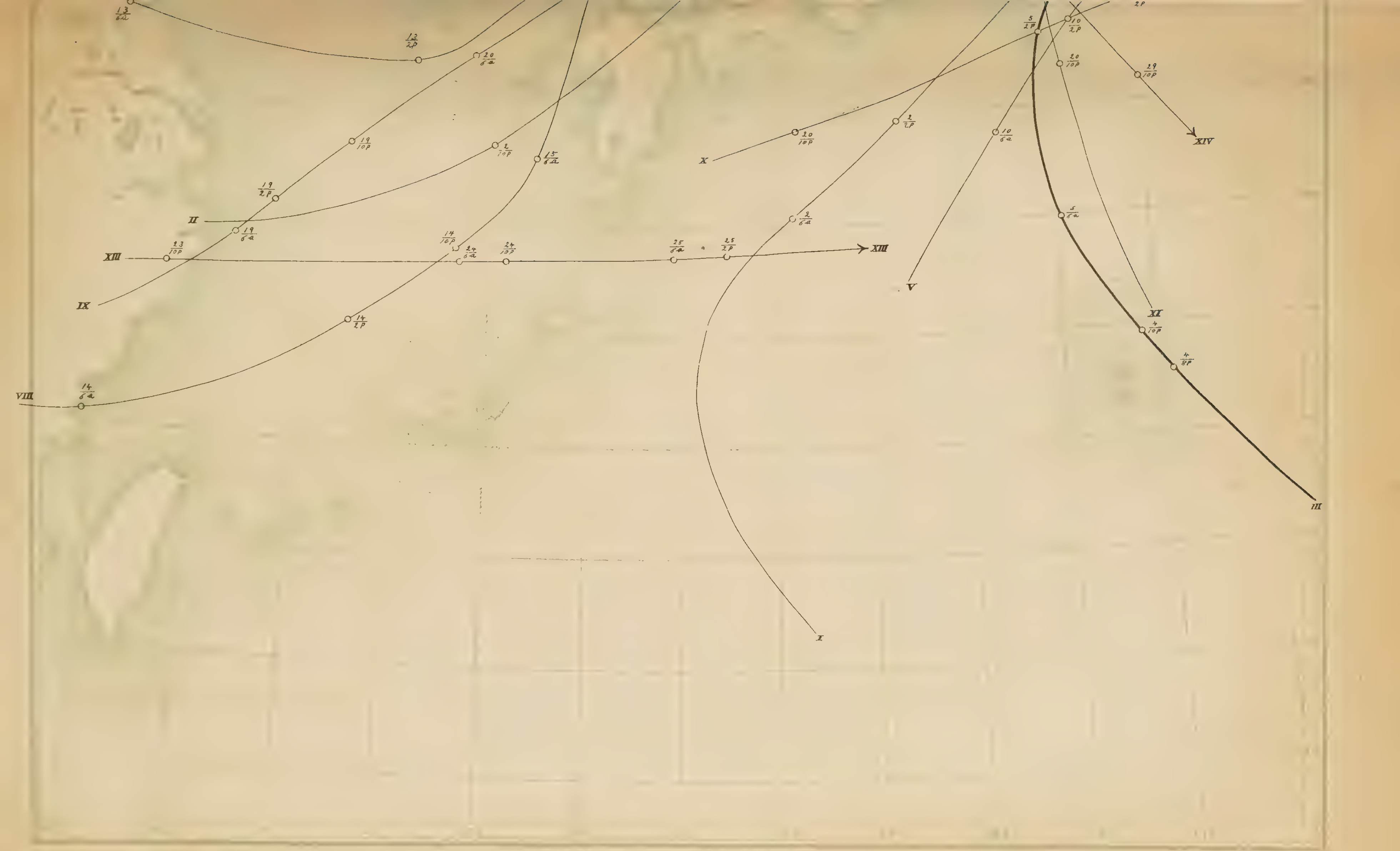



TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
September, 1904.
I
II
III
IV
V
VI
VII


IV
II
5 / 6 a
III
8 / 2 p
15 / 10 p
20 / 10 p
16 / 2 p
20 / 2 p
2 / 2 p
VI
I
V

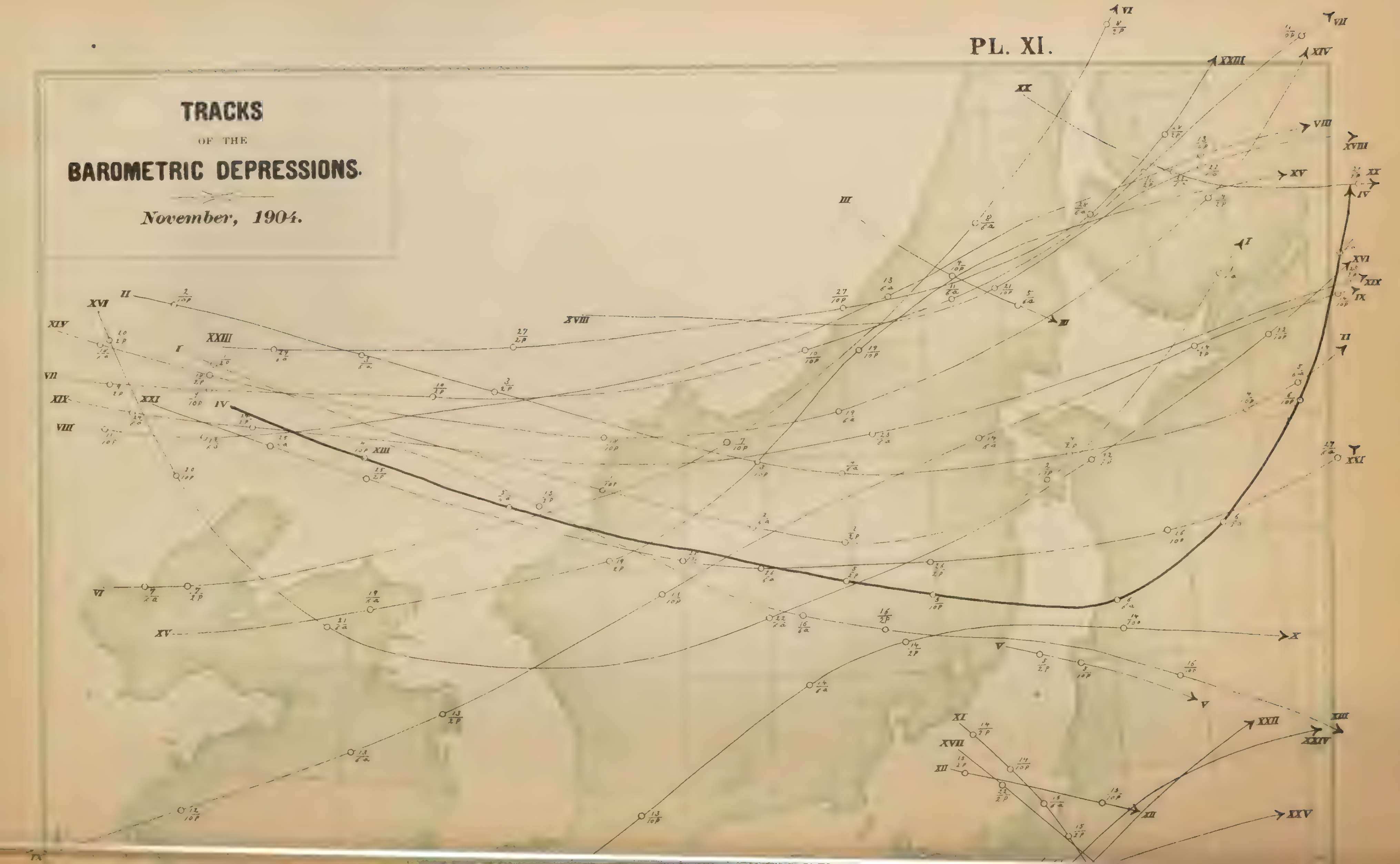
PL. X.


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
October, 1904.
XII
IV
VI
IX
II
VIII
XI
III
XIV
VII
I
V
X



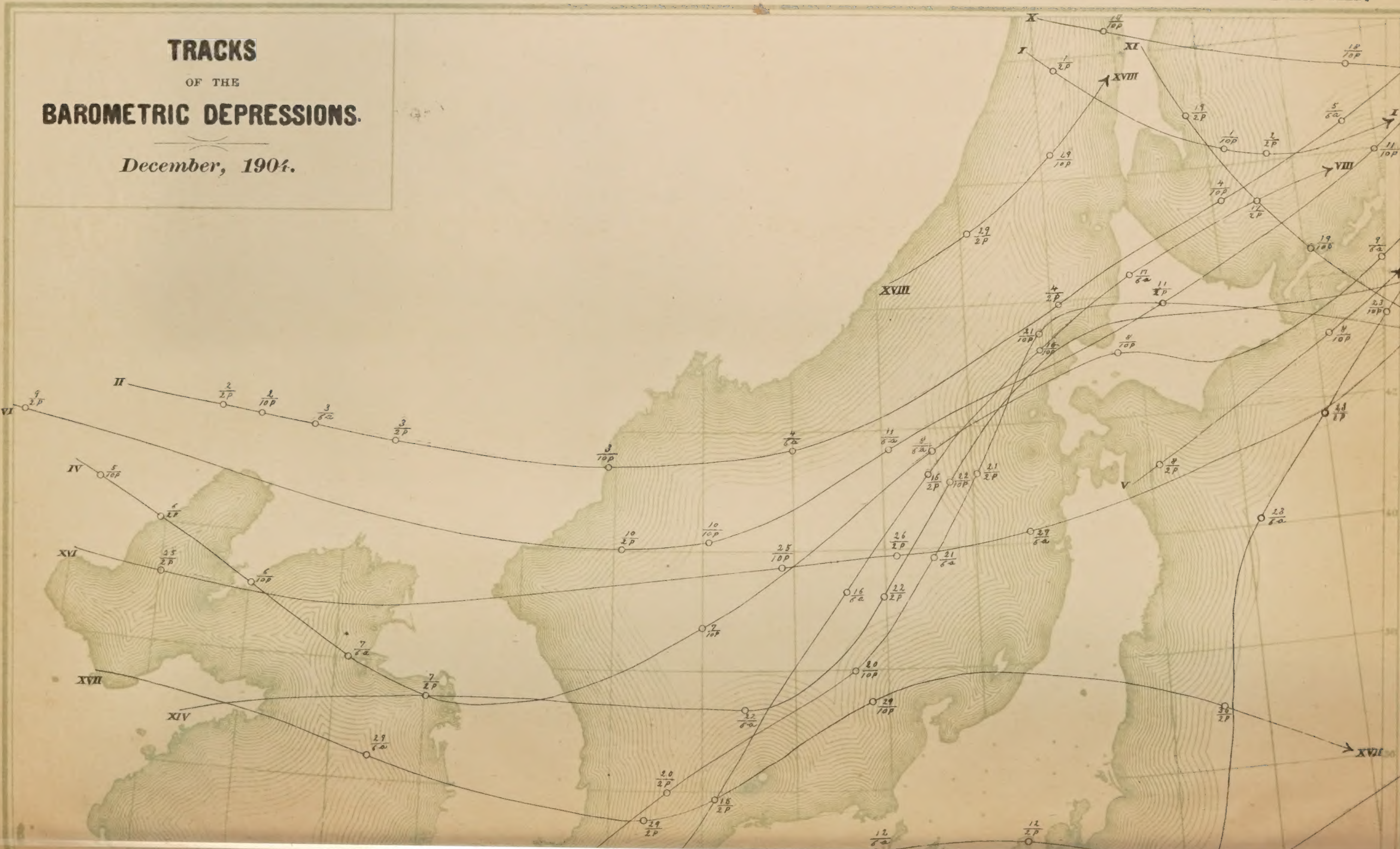
I
II
III
V
VIII
IX
X
XI
XIII
XIV

PL. XI.




X
XI
XVII
XXII
XXIV
XXV

PL. XII.




XII
VIII
12/2p
14/10p
15/6a
20/10p
30/6a
16/6a
21/7p
16/2p
4/2p
XIII
IX
22/2p
14/2p
XIII
III
XIX
13/10p
22/6a
XV
13/2p
IX
120
122
124
126
128
130
132
134
136
138
140
142
20
22
24
26
28
30